

# Exhibit A

**Exhibit A - U.S. Patent No. 8,589,541 (“’541 Patent”)**

Accused Instrumentalities: smartphones, basic phones, tablets, laptops, and hotspot devices sold (including those sold in bundles with data plans) or used by Verizon and all versions and variations thereof (“Accused Instrumentalities”) since the issuance of U.S. Pat. No. 8,589,541 (the “Asserted Patent”).

**Claim 1**





Claim	Public Documentation
[1a] A non-transitory computer-readable storage medium storing machine-executable instructions that, when executed by one or more processors of a wireless end-user device, cause the one or more processors to:	<p>The Accused Instrumentalities include “A non-transitory computer-readable storage medium storing machine-executable instructions that, when executed by one or more processors of a wireless end-user device, cause the one or more processors to.”</p> <p>For example, Verizon sells and uses devices described by Verizon’s website below (e.g., devices made by Samsung, Apple, Motorola, Google, and Kyocera). These devices constitute a wireless end-user device as described in claim 1. <i>See, e.g.:</i> <a href="https://www.verizon.com/shop/online/5g-cell-phones/apple/">https://www.verizon.com/shop/online/5g-cell-phones/apple/</a>:</p>

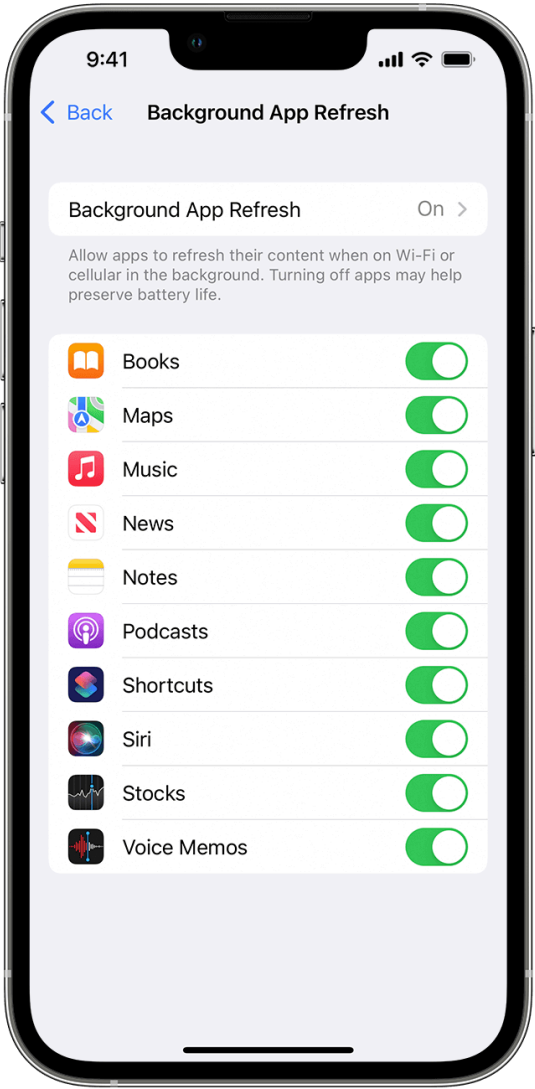
Claim	Public Documentation
	<div><div><div><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div><div><div><div>✓</div><div>Shop</div><div>Why Verizon</div><div>Support</div></div><div><div>Sign in</div><div></div><div>Search </div></div></div><div>Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div></div><div><div>Home / Smartphones / Apple</div><div><div> Chat</div><div> Video Call</div><div> Call</div></div></div></div> <div><div><div>Shop Apple smartphones</div><div><div>All</div><div>Free phones</div><div>Samsung</div><div>Apple</div><div>Motorola</div><div>Google</div><div>Kyocera</div></div></div><div><div>Lowest price with trade-in offer <input type="checkbox"/></div><div>30 results</div><div>Sort by: Featured </div></div><div><div>Apple  <a href="#">Clear all</a></div><div><div>Filter</div><div><div>Brand (1)</div><div><input checked="" type="checkbox"/> Apple (30)</div></div><div><div>OS</div></div><div><div>Special Offers</div></div><div><div>In Store Pickup</div></div><div><div>Price</div></div></div><div><div><div><div></div><div><div>Apple iPhone 15 Pro</div><div>Starts at \$27.77/mo for 36 months, 0% APR Retail price: \$999.99</div><div><div><div></div><div></div><div></div><div></div></div><div><input type="checkbox"/> Compare</div><div></div></div></div><div><div></div><div><div>Apple iPhone 15 Pro Max</div><div>Starts at \$33.33/mo for 36 months, 0% APR Retail price: \$1199.99</div><div><div><div></div><div></div><div></div><div></div></div><div><input type="checkbox"/> Compare</div><div></div></div></div><div><div><div>Titanium</div><div>iPhone 15 Pro</div><div></div><div>Get it on us. With any iPhone trade-in. Any model. Any condition. Guaranteed. With Unlimited Ultimate. <a href="#">Details</a></div><div>Buy &gt;</div></div></div></div></div></div><div>As a specific example, Apple’s devices, including the Apple iPhone 15 Pro, are wireless end-user devices which run the Apple iOS Operating System. <i>See, e.g.</i>, <a href="https://www.verizon.com/smartphones/apple-iphone-15-pro/">https://www.verizon.com/smartphones/apple-iphone-15-pro/</a>:</div></div></div></div>

Claim	Public Documentation
	<p><b>Performance</b></p> <p><b>Storage</b> 128GB, 256GB, 512GB, 1TB (Subject to availability)</p> <hr/> <p><b>OS</b> Apple iOS</p> <hr/> <p><b>Wi-fi</b> Yes</p> <hr/> <p>Verizon sells smartphones on <a href="https://www.verizon.com/smartphones">https://www.verizon.com/smartphones</a>. Verizon sells “basic” phones on <a href="https://www.verizon.com/basic-phones">https://www.verizon.com/basic-phones</a>. Verizon sells hotspot devices on <a href="https://www.verizon.com/internet-devices">https://www.verizon.com/internet-devices</a>. Verizon sells laptops and tablets on <a href="https://www.verizon.com/tablets">https://www.verizon.com/tablets</a>. For example, the Apple iPhone 15 Pro model is sold or used by Verizon and includes 128GB, 256GB, 512GB, or 1TB of memory storage, in which control policies for applications are stored. <i>See, e.g.,</i> <a href="https://www.apple.com/iphone-15-pro/specs/">https://www.apple.com/iphone-15-pro/specs/</a>:</p>



Claim	Public Documentation
	<div><div><div>Capacity<sup>1</sup></div><div><div>128GB</div><div>256GB</div><div>512GB</div><div>1TB</div></div><div><div>256GB</div><div>512GB</div><div>1TB</div></div></div></div> <p>For further example, the Apple iPhone 15 Pro model has a A17 Pro Chip. <i>See, e.g.,</i> <a href="https://www.apple.com/iphone-15-pro/specs/">https://www.apple.com/iphone-15-pro/specs/</a></p> <div><div>Chip</div><div><div>A17 PRO</div></div><div><div>A17 Pro chip</div><div>New 6-core CPU with 2 performance and 4 efficiency cores</div><div>New 6-core GPU</div><div>New 16-core Neural Engine</div></div></div>
[1b] identify a service usage activity of the wireless end-user device, the service usage activity being associated with a first software component of a plurality of software components on the wireless end-user device, the service usage activity comprising one or more prospective or successful communications over a wireless network;	<p>The Accused Instrumentalities “identify a service usage activity of the wireless end-user device, the service usage activity being associated with a first software component of a plurality of software components on the wireless end-user device, the service usage activity comprising one or more prospective or successful communications over a wireless network.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, run the Apple iOS Operating System, which comprise at least Apple’s “Background App Refresh” and “Low Power Mode” settings apply to at least some service usage activities associated with a software component comprising prospective or successful communications over a wireless network. <i>See, e.g.,</i> <a href="https://www.verizon.com/support/knowledge-base-207174/">https://www.verizon.com/support/knowledge-base-207174/</a>:</p>

Claim	Public Documentation
	<div><div><div><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div><div><div><div></div><div>Shop</div><div>Why Verizon</div><div>Support</div></div><div><div>Sign in</div><div></div><div>Search </div></div></div><div><div>Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div></div></div><div><div><a href="#">Support</a> &gt; <a href="#">Apple</a> &gt; <a href="#">Apple iPhone 7 Plus</a></div><div><h2>Apple iPhone - Turn Background App Refresh On / Off</h2></div><div><div><div><b>NOTE</b></div><div>When Background App Refresh is turned on, apps that take advantage of this feature can refresh themselves in the background. For additional info, refer to <a href="#">multitasking and background app refresh</a>.</div></div></div><div><div><div>1.</div><div>From a Home screen on your <b>Settings</b>  &gt; <b>General</b>. → If an app isn't available on your Home screen, swipe left to access the App Library.</div></div><div><div>2.</div><div>Tap <b>Background App Refresh</b> twice then tap one of the following: → When low power mode is on, the background app refresh is disabled.<ul style="list-style-type: none"><li>Off</li><li>Wi-Fi</li><li>Wi-Fi and Cellular Data</li></ul></div></div></div><div><a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</div></div></div>

Claim	Public Documentation
	<div data-bbox="606 306 1297 363"><h2>Use Background App Refresh</h2></div> <div data-bbox="606 393 1379 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="606 673 1375 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1146 1412"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 261 1969 1343"></div>

# Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

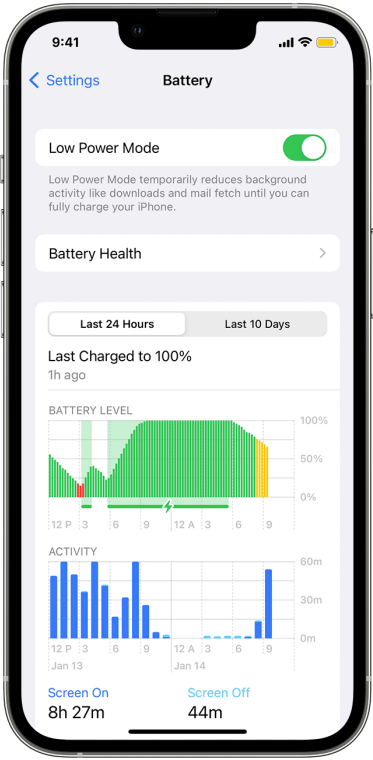
To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

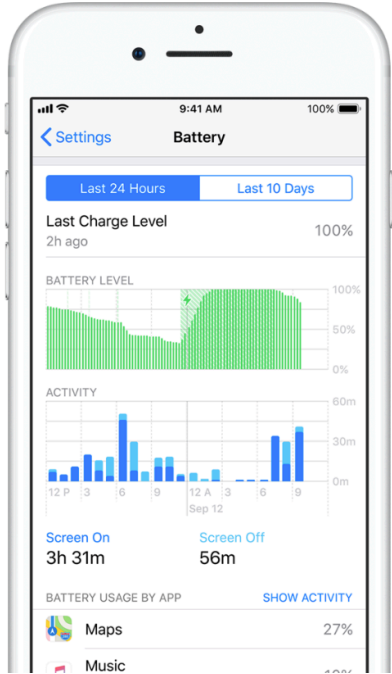
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

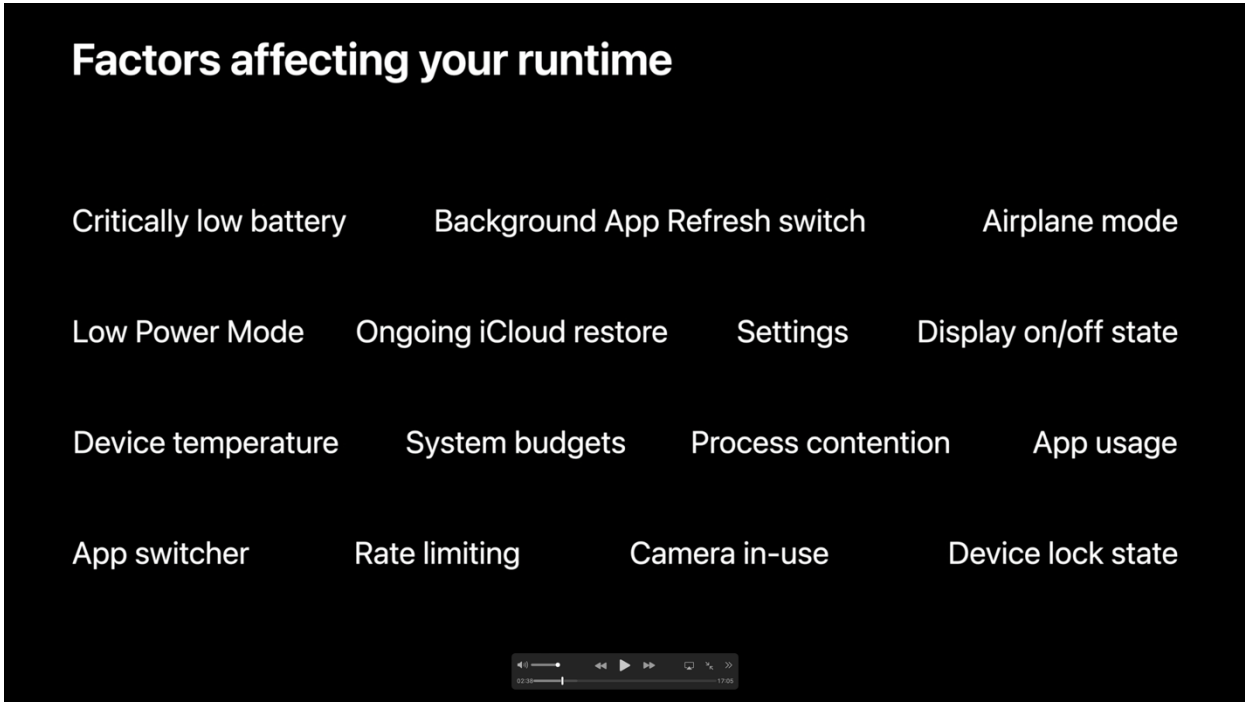









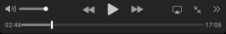
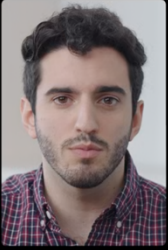
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

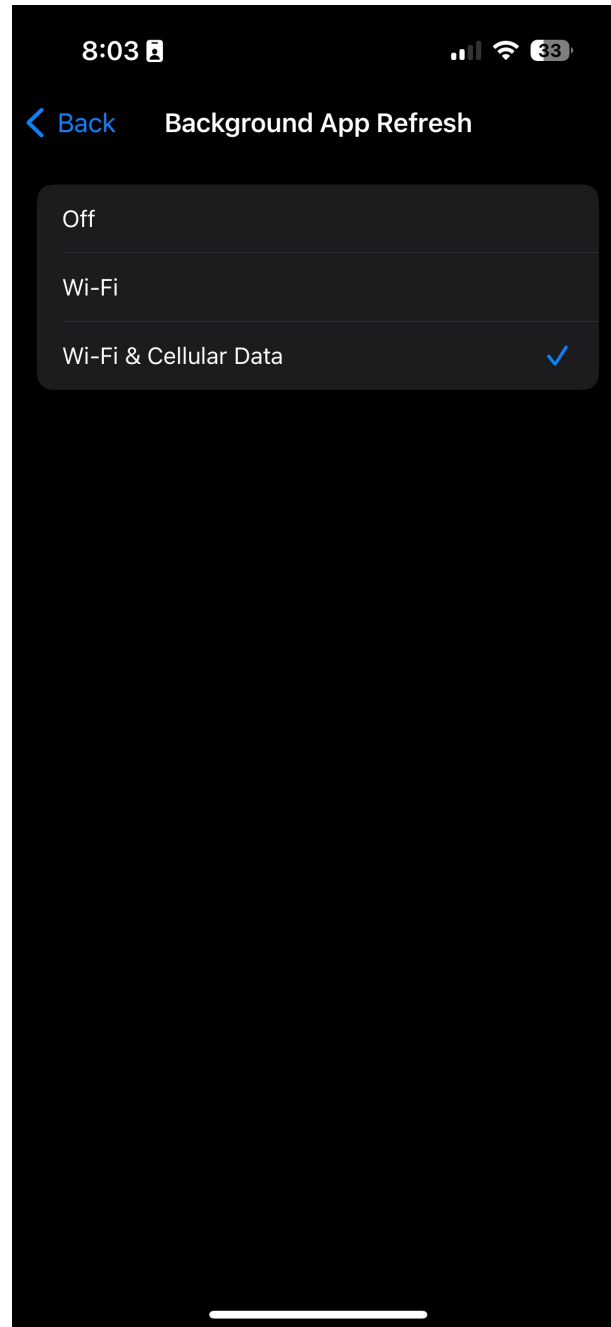
Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2>View Battery Usage information</h2> <p>With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p>Here are the messages you may see listed below the apps you've been using:</p> <p><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul style="list-style-type: none"><li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li><li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li></ul>  <p>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>; <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-</a></p>


Claim	Public Documentation
	<p> <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">ing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask;">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask;">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask;">https://developer.apple.com/documentation/backgroundtasks/bgtask;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate;">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/state;">https://developer.apple.com/documentation/uikit/uiapplication/state;</a> <a href="https://developer.apple.com/documentation/foundation/url_loading_system;">https://developer.apple.com/documentation/foundation/url_loading_system;</a> <a href="https://developer.apple.com/documentation/foundation/urlsession;">https://developer.apple.com/documentation/foundation/urlsession;</a> <a href="https://developer.apple.com/documentation/devicemanagement/mail;">https://developer.apple.com/documentation/devicemanagement/mail;</a> <a href="https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication/">https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication;</a> <a href="https://developer.apple.com/documentation/networkextension/personal_vpn;">https://developer.apple.com/documentation/networkextension/personal_vpn;</a> <a href="https://developer.apple.com/documentation/foundation/nsproxy;">https://developer.apple.com/documentation/foundation/nsproxy;</a> <a href="https://developer.apple.com/documentation/messages;">https://developer.apple.com/documentation/messages;</a> <a href="https://developer.apple.com/documentation/avfoundation/avplayer;">https://developer.apple.com/documentation/avfoundation/avplayer;</a> <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback;">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback;</a> <a href="https://developer.apple.com/videos/play/wwdc2019/707/">https://developer.apple.com/videos/play/wwdc2019/707/;</a> <a href="https://developer.apple.com/videos/play/wwdc2020/10063/">https://developer.apple.com/videos/play/wwdc2020/10063/;</a> </p>


Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, a grid of 12 factors is displayed in four rows and three columns. At the bottom, a video player control bar is visible, showing a progress bar at 02:28 out of 17:08.</p> <p><b>Factors affecting your runtime</b></p> <ul style="list-style-type: none"><li>Critically low battery</li><li>Background App Refresh switch</li><li>Airplane mode</li><li>Low Power Mode</li><li>Ongoing iCloud restore</li><li>Settings</li><li>Display on/off state</li><li>Device temperature</li><li>System budgets</li><li>Process contention</li><li>App usage</li><li>App switcher</li><li>Rate limiting</li><li>Camera in-use</li><li>Device lock state</li></ul>




Claim	Public Documentation
	<div data-bbox="585 237 1822 933"><h3>Top factors</h3><ul style="list-style-type: none"><li> Critically low battery</li><li> Low Power Mode</li><li> App usage</li><li> App switcher</li><li> Background App Refresh switch</li><li> System budgets</li><li> Rate limiting</li></ul></div> <p data-bbox="585 938 1108 971">; see also exemplary screen shots below:</p>





Claim	Public Documentation
	 <p>The image shows three Apple Watch screens side-by-side. The first screen is the 'Settings' menu with options for General, Do Not Disturb, and Airplane Mode. The second screen is the 'General' settings page with options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen is the 'Background App Refresh' settings page, showing a toggle switch for 'Background App Refresh' which is currently turned off. Below the toggle, there is explanatory text: 'Turning off Background App Refresh may preserve battery life. Apps with complications on the current watch face will continue to refresh, even when their background app refresh setting is off.'</p> <p>See also, e.g., <a href="https://www.verizon.com/plans/">https://www.verizon.com/plans/</a>; <a href="https://www.verizon.com/business/products/plans/">https://www.verizon.com/business/products/plans/</a>; <a href="https://www.verizon.com/plans/international/international-travel/">https://www.verizon.com/plans/international/international-travel/</a>; <a href="https://www.verizon.com/support/international-travel-faqs/">https://www.verizon.com/support/international-travel-faqs/</a>.</p>
<p>[1c] determine whether the service usage activity comprises a background activity;</p>	<p>The Accused Instrumentalities “determine whether the service usage activity comprises a background activity.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, run the Apple iOS Operating System, which comprise at least Apple’s “Background App Refresh” and “Low Power Mode” determine whether the service usage activity comprises background or foreground activity. See also, e.g., <a href="https://www.verizon.com/support/data-usage-faqs/">https://www.verizon.com/support/data-usage-faqs/</a>:</p>

Claim	Public Documentation
	<p data-bbox="625 342 1312 383">What is indirect or background data usage? </p> <p data-bbox="625 440 1877 509">Indirect data usage occurs in the background, during tasks performed automatically by your device. Some examples of indirect data usage are:</p> <ul data-bbox="617 548 1197 808" style="list-style-type: none"><li data-bbox="617 548 1197 586">• Automatic backups of pictures or videos</li><li data-bbox="617 623 917 660">• Software updates</li><li data-bbox="617 698 974 735">• App content refreshes</li><li data-bbox="617 773 1066 808">• Syncing and location services</li></ul> <p data-bbox="625 846 1383 883">Note: You can adjust these functions in your device Settings.</p> <p data-bbox="583 937 1373 972">; <a href="https://www.verizon.com/support/knowledge-base-207174/">https://www.verizon.com/support/knowledge-base-207174/</a>:</p>


Claim	Public Documentation
	<div data-bbox="585 238 1965 412"><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div> <div><div>Shop</div><div>Why Verizon</div><div>Support</div><div>Sign in</div><div></div><div>Search </div></div> <div>Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div>

[Support](#) > [Apple](#) > [Apple iPhone 7 Plus](#)

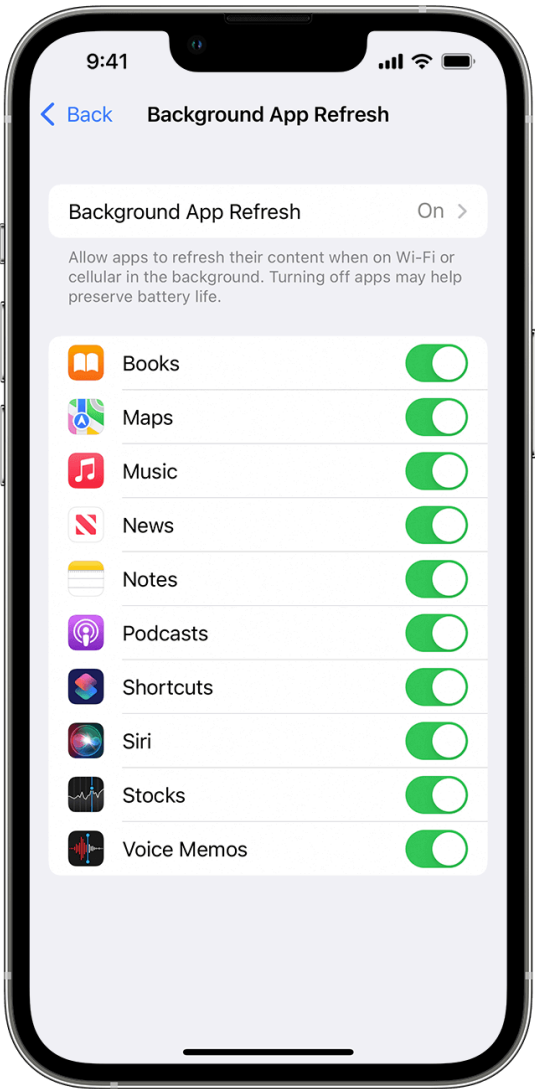
## Apple iPhone - Turn Background App Refresh On / Off

**NOTE**

When Background App Refresh is turned on, apps that take advantage of this feature can refresh themselves in the background. For additional info, refer to [multitasking and background app refresh](#).

1. From a Home screen on your **Settings**  > **General**.  
→ If an app isn't available on your Home screen, swipe left to access the App Library.
2. Tap **Background App Refresh** twice then tap one of the following:  
→ When low power mode is on, the background app refresh is disabled.
  - Off
  - Wi-Fi
  - Wi-Fi and Cellular Data

<https://support.apple.com/en-us/HT202070>:

Claim	Public Documentation
	<div data-bbox="604 305 1297 363"><h2>Use Background App Refresh</h2></div> <div data-bbox="604 389 1377 639"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="604 672 1373 880"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1146 1412"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 259 1969 1341"></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:


- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

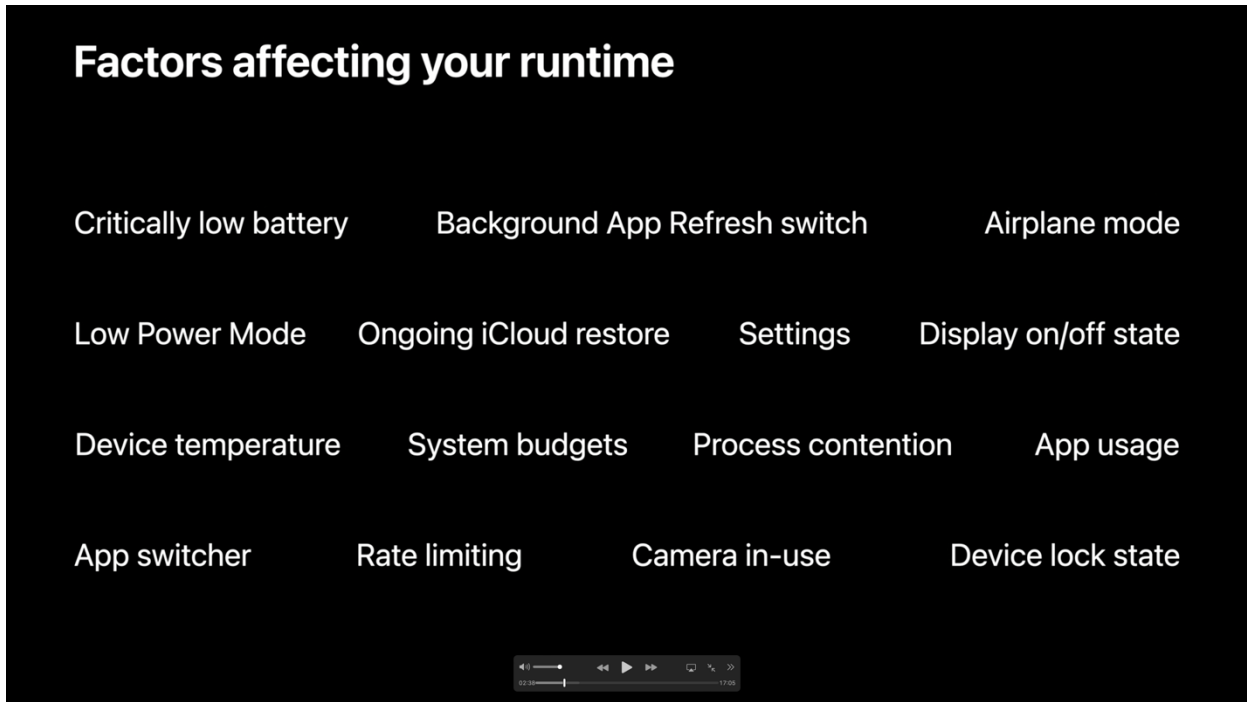
2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.








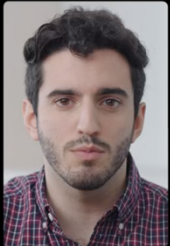

Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1396 358">View Battery Usage information</h2> <p data-bbox="625 378 1316 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 584">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 656 1293 745"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 779 1316 1024" style="list-style-type: none"> <li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li> <li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li> </ul>  <p data-bbox="585 1068 1736 1101">; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate</a>:</p>


Claim	Public Documentation
	<p data-bbox="611 248 854 280">Instance Property</p> <h2 data-bbox="611 318 1020 375">applicationState</h2> <p data-bbox="611 399 1316 431">The app's current state, or that of its most active scene.</p> <div data-bbox="611 469 1375 501"> <span>iOS 4.0+</span> <span>iPadOS 4.0+</span> <span>Mac Catalyst 13.1+</span> <span>tvOS 9.0+</span> <span>visionOS 1.0+ Beta</span> </div> <pre data-bbox="632 561 1270 586">var applicationState: UIApplication.State { get }</pre> <hr data-bbox="611 662 1942 665"/> <h2 data-bbox="611 727 840 768">Discussion</h2> <p data-bbox="611 800 1451 833">The behavior of this property depends on whether your app is scene-based.</p> <p data-bbox="611 857 1927 995">In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's <a href="#">activationState</a> property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use <a href="#">UISceneDelegate</a> to respond to changes in an individual scene's life cycle.</p> <p data-bbox="611 1019 1938 1190">In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use <a href="#">UIApplicationDelegate</a> to respond to the app's life cycle changes.</p> <p data-bbox="585 1214 1990 1425">; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>;</p>







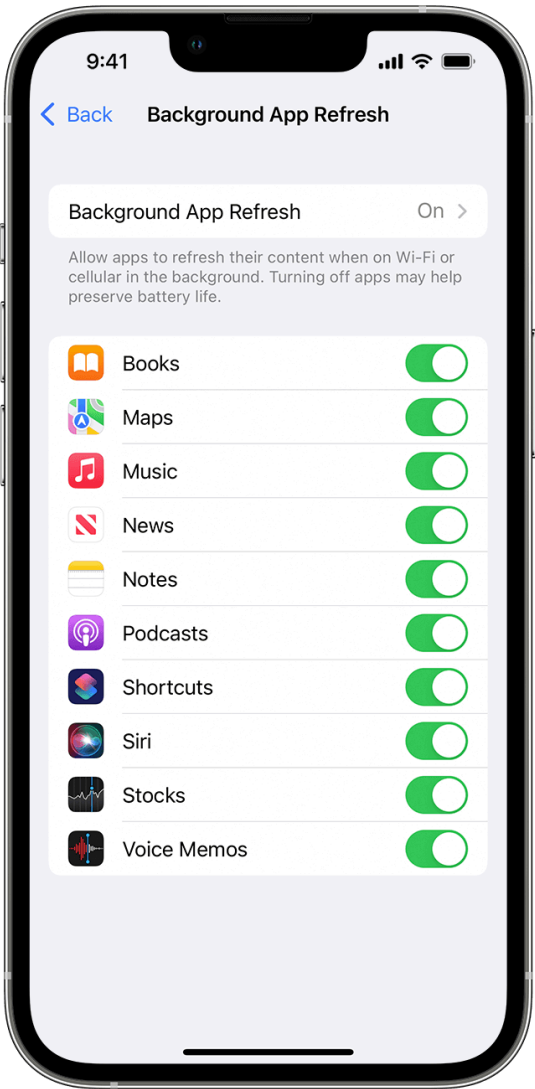
Claim	Public Documentation
	<p> <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>;  <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks">https://developer.apple.com/documentation/backgroundtasks</a>  <a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask">https://developer.apple.com/documentation/backgroundtasks/bgtask</a>;  <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/</a>;  <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_foreground/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_foreground/</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate</a>;  <a href="https://developer.apple.com/documentation/uikit/uiapplication/state">https://developer.apple.com/documentation/uikit/uiapplication/state</a>; <a href="https://developer.apple.com/documentation/foundation/url_loading_system">https://developer.apple.com/documentation/foundation/url_loading_system</a>; <a href="https://developer.apple.com/documentation/foundation/urlsession">https://developer.apple.com/documentation/foundation/urlsession</a>;  <a href="https://developer.apple.com/documentation/avfoundation/avplayer">https://developer.apple.com/documentation/avfoundation/avplayer</a>; <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback</a>;  <a href="https://developer.apple.com/videos/play/wwdc2019/707/">https://developer.apple.com/videos/play/wwdc2019/707/</a>; <a href="https://developer.apple.com/videos/play/wwdc2020/10063">https://developer.apple.com/videos/play/wwdc2020/10063</a>; </p>

Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, there are four rows of factors, each with four items:</p> <ul style="list-style-type: none"><li>Row 1: Critically low battery, Background App Refresh switch, Airplane mode</li><li>Row 2: Low Power Mode, Ongoing iCloud restore, Settings, Display on/off state</li><li>Row 3: Device temperature, System budgets, Process contention, App usage</li><li>Row 4: App switcher, Rate limiting, Camera in-use, Device lock state</li></ul> <p>At the bottom of the video frame, there is a playback control bar showing a progress bar at 32:38 out of 17:08.</p>

Claim	Public Documentation
	<div data-bbox="583 240 1822 938"><h3 data-bbox="653 272 877 321">Top factors</h3><div data-bbox="682 430 1249 868"><div data-bbox="682 430 1092 470"> Critically low battery</div><div data-bbox="682 495 1050 535"> Low Power Mode</div><div data-bbox="682 552 966 609"> App usage</div><div data-bbox="682 625 997 665"> App switcher</div><div data-bbox="682 690 1249 730"> Background App Refresh switch</div><div data-bbox="682 755 1039 795"> System budgets</div><div data-bbox="682 820 976 868"> Rate limiting</div></div><div data-bbox="1617 649 1785 893"></div><div data-bbox="1092 885 1312 917"></div></div>

Claim	Public Documentation
	 <p>The image displays three Apple Watch screens side-by-side. The first screen shows the 'Settings' menu with options for General, Do Not Disturb, and Airplane Mode. The second screen shows the 'General' settings menu with options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen shows the 'Background App Refresh' settings menu, where the toggle is turned off, and a message states: 'Turning off Background App Refresh may preserve battery life. Apps with complications on the current watch face will continue to refresh, even when their background app refresh setting is off.'</p>
<p>[1d] determine at least an aspect of a policy based on a user input obtained through a user interface of the wireless end-user device or based on information from a network element, the policy to be applied if the service usage activity is the background activity, the policy at least for controlling the service usage activity;</p>	<p>The Accused Instrumentalities “determine at least an aspect of a policy based on a user input obtained through a user interface of the wireless end-user device or based on information from a network element, the policy to be applied if the service usage activity is the background activity, the policy at least for controlling the service usage activity.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, comprise an interface which allow users to specify multiple aspects of policies based on user input in various settings (e.g., enabling/disabling Background App Refresh and Low Power Mode as well as enabling/disabling policies for specific applications) controlling service usage activities. <i>See, e.g.,</i> <a href="https://www.verizon.com/support/knowledge-base-207174/">https://www.verizon.com/support/knowledge-base-207174/</a>:</p>

Claim	Public Documentation
	<div data-bbox="585 240 1965 412"><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div> <div data-bbox="588 292 1963 341"><div></div><div>Shop</div><div>Why Verizon</div><div>Support</div><div>Sign in</div><div></div><div>Search </div></div> <div data-bbox="718 380 1822 396">Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div> <div data-bbox="606 435 840 451"><a href="#">Support</a> &gt; <a href="#">Apple</a> &gt; <a href="#">Apple iPhone 7 Plus</a></div> <div data-bbox="627 490 1381 578"><h2>Apple iPhone - Turn Background App Refresh On / Off</h2></div> <div data-bbox="657 654 705 670"><b>NOTE</b></div> <div data-bbox="657 680 1339 725"><p>When Background App Refresh is turned on, apps that take advantage of this feature can refresh themselves in the background. For additional info, refer to <a href="#">multitasking and background app refresh</a>.</p></div> <div data-bbox="632 784 1251 1002"><ol style="list-style-type: none"><li>1. From a Home screen on your <b>Settings</b>  &gt; <b>General</b>. → If an app isn't available on your Home screen, swipe left to access the App Library.</li><li>2. Tap <b>Background App Refresh</b> twice then tap one of the following: → When low power mode is on, the background app refresh is disabled.<ul style="list-style-type: none"><li>• Off</li><li>• Wi-Fi</li><li>• Wi-Fi and Cellular Data</li></ul></li></ol></div> <div data-bbox="588 1029 1144 1063"><p><a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p></div>

Claim	Public Documentation
	<div data-bbox="606 305 1297 362"><h2>Use Background App Refresh</h2></div> <div data-bbox="606 391 1377 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="606 670 1373 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1146 1412"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 259 1969 1341"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays the time '9:41' and signal strength. The navigation bar has a blue back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is currently turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on (green): Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

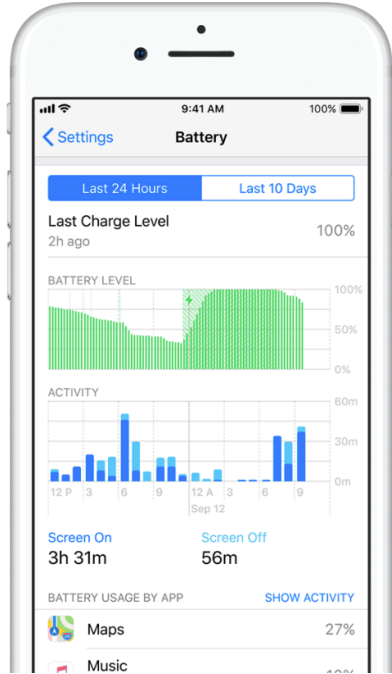
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

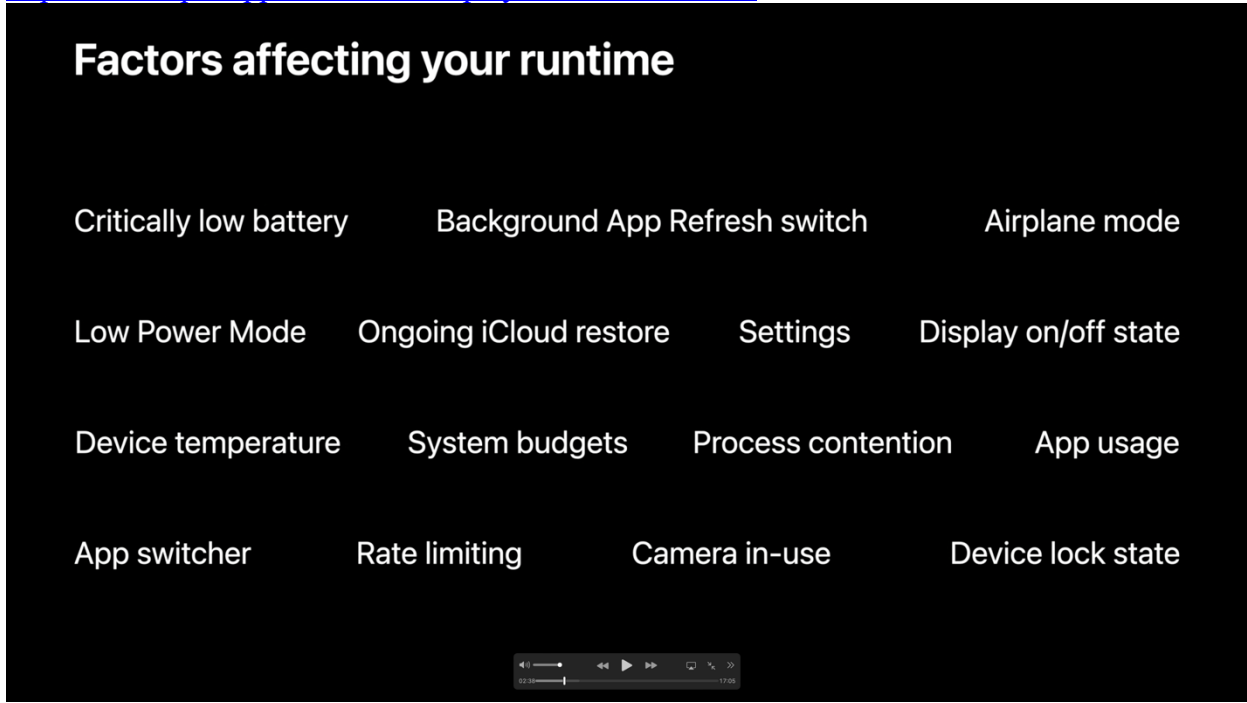










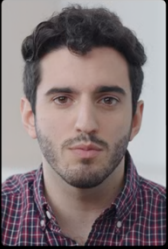
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).


2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.




Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1396 358">View Battery Usage information</h2> <p data-bbox="625 378 1316 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 581">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 654 1293 743"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 776 1316 1024" style="list-style-type: none"> <li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li> <li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li> </ul>  <p data-bbox="583 1073 1990 1357">; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>; <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/prepar-</a></p>



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	<p> <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">ing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/; https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgappprefreshtask;">https://developer.apple.com/documentation/backgroundtasks/bgappprefreshtask;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask;">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask;</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask;">https://developer.apple.com/documentation/backgroundtasks/bgtask;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">backgroundfetchintervalminimum/;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">backgroundrefreshstatus/;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate/">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate/;</a> <a href="https://developer.apple.com/documentation/uikit/uiapplication/state/">https://developer.apple.com/documentation/uikit/uiapplication/state/;</a> <a href="https://developer.apple.com/documentation/foundation/url_loading_system/">https://developer.apple.com/documentation/foundation/url_loading_system/;</a> <a href="https://developer.apple.com/documentation/foundation/urlsession/">https://developer.apple.com/documentation/foundation/urlsession/;</a> <a href="https://developer.apple.com/documentation/avfoundation/avplayer/">https://developer.apple.com/documentation/avfoundation/avplayer/;</a> <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback/">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback/;</a> <a href="https://developer.apple.com/videos/play/wwdc2019/707/">https://developer.apple.com/videos/play/wwdc2019/707/;</a> <a href="https://developer.apple.com/videos/play/wwdc2020/10063/">https://developer.apple.com/videos/play/wwdc2020/10063/;</a> </p>  <p>The screenshot shows a video player interface with a title 'Factors affecting your runtime'. Below the title, there is a grid of 12 factors arranged in 4 rows and 3 columns:</p> <ul style="list-style-type: none"> <li>Row 1: Critically low battery, Background App Refresh switch, Airplane mode</li> <li>Row 2: Low Power Mode, Ongoing iCloud restore, Settings, Display on/off state</li> <li>Row 3: Device temperature, System budgets, Process contention, App usage</li> <li>Row 4: App switcher, Rate limiting, Camera in-use, Device lock state</li> </ul> <p>At the bottom of the video player, there is a progress bar and a timestamp '02:28 / 17:05'.</p>


Claim	Public Documentation
	<div data-bbox="588 235 1822 937"><h3>Top factors</h3><ul style="list-style-type: none"><li> Critically low battery</li><li> Low Power Mode</li><li> App usage</li><li> App switcher</li><li> Background App Refresh switch</li><li> System budgets</li><li> Rate limiting</li></ul></div>

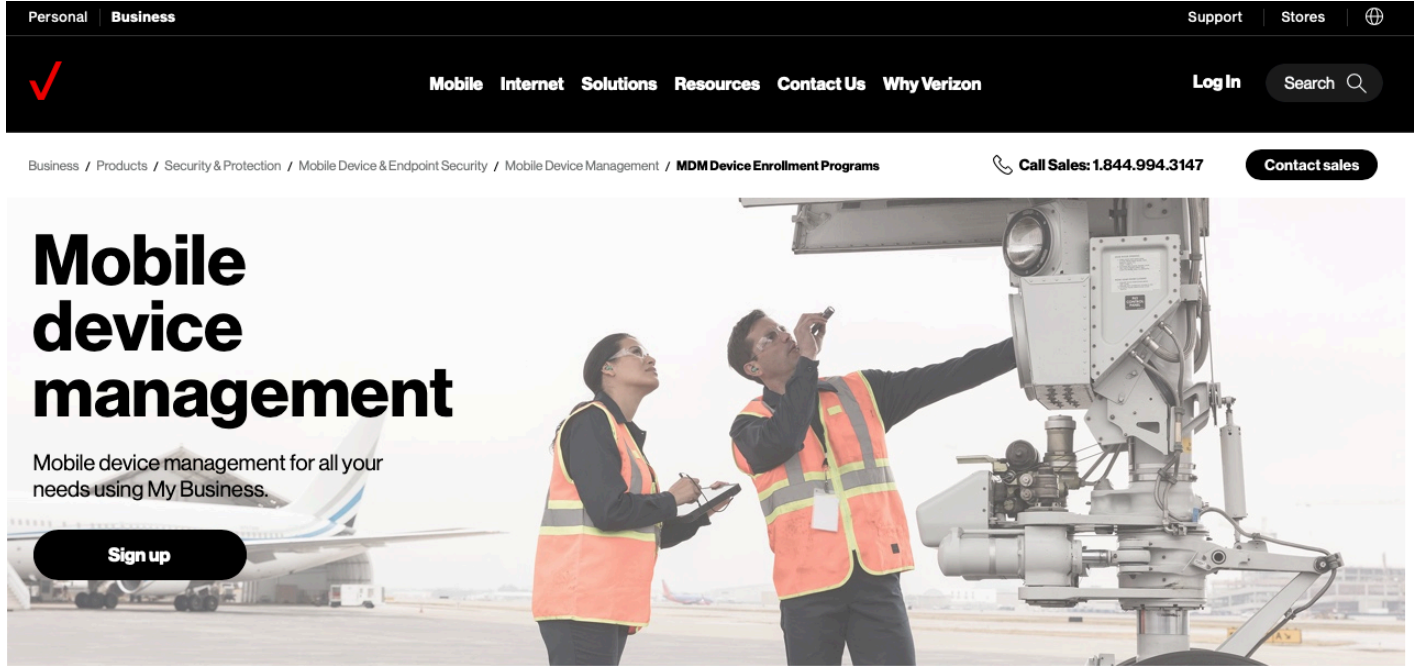
Claim	Public Documentation
	<div data-bbox="590 248 1755 854">Three Apple Watch screenshots are displayed side-by-side. The first watch shows the 'Settings' app with options for 'General', 'Do Not Disturb', and 'Airplane Mode'. The second watch shows the 'General' settings page with options for 'Software Update', 'Orientation', 'Background App Refresh', and 'Wake Screen'. The third watch shows the 'Background App Refresh' settings page, where the toggle is turned off, and a message explains that turning it off may preserve battery life and that apps with complications will continue to refresh even when the setting is off.</div> <p data-bbox="590 906 1990 976">As yet another example, the Accused Instrumentalities determine aspects of policies based on information from a network element. <i>See, e.g.,</i> <a href="https://www.verizon.com/plans/">https://www.verizon.com/plans/</a>:</p>

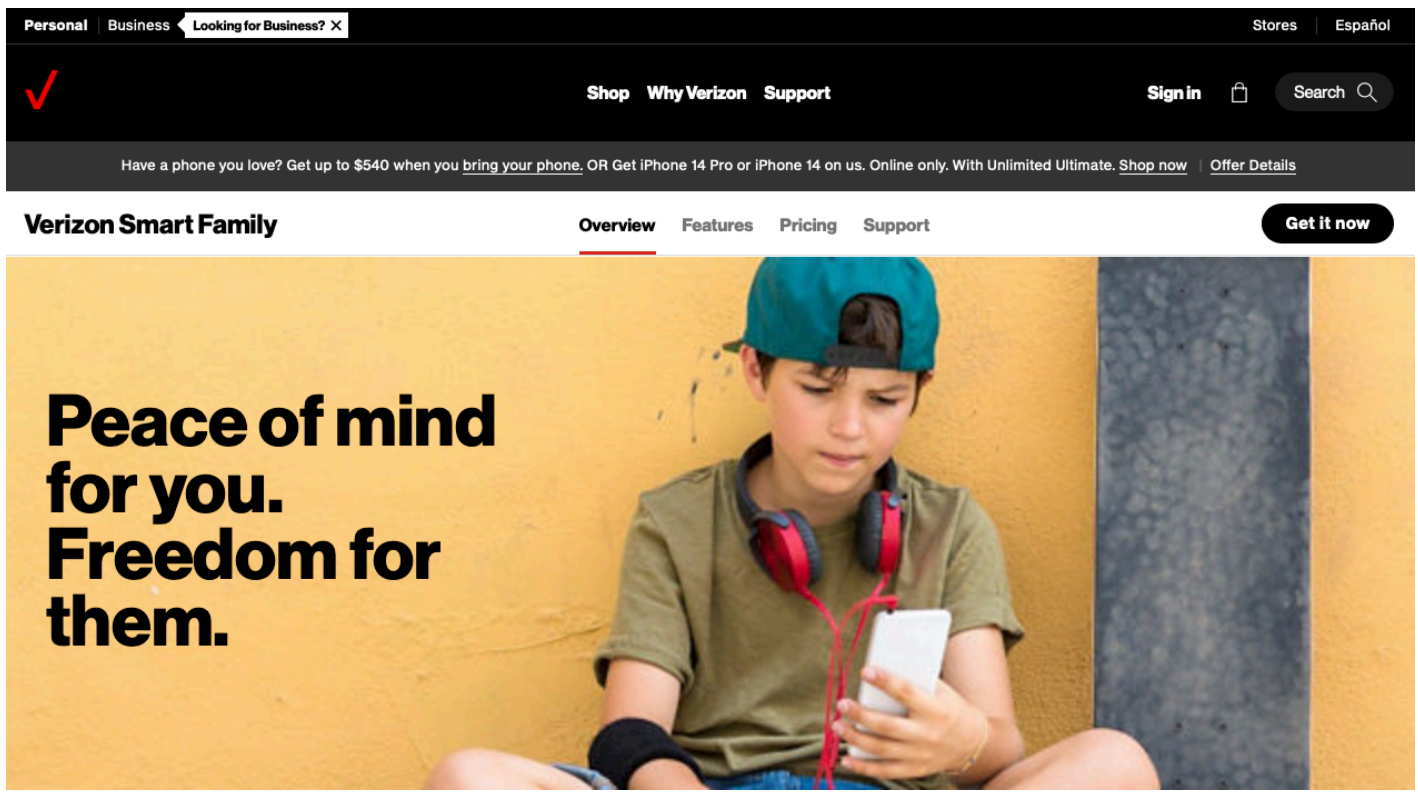
Claim	Public Documentation
	<div><div><div><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div><div><div></div><div><a href="#">Shop</a> <a href="#">Why Verizon</a> <a href="#">Support</a></div><div><a href="#">Sign in</a> </div><div><div>Search</div></div></div><div>Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div></div></div> <div><div><h2>Pick your perfect plan.</h2><p>Experience ultra-fast mobile and home internet plans. Plus, get special discounts to save you more.</p></div><div><div><h3>Mobile plans</h3><p>Get our best plans ever, with unlimited data on all your devices.</p><div><div><div>Unlimited</div><div>Get the power of 5G Ultra Wideband with unlimited data and 10x faster speeds.<sup>1</sup></div><div>→</div></div><div><div>Prepaid</div><div>Pay before you talk, text and stream. Now including Unlimited and 5G.</div><div>→</div></div><div><div>Connected devices</div><div>Get unlimited monthly data for devices such as mobile hotspots, tablets, laptops, smartwatches and more.</div><div>→</div></div><div><div>International</div><div>Whether you're traveling the world or at home in the US, Verizon helps you stay connected.</div><div>→</div></div></div></div><div><p>; <a href="https://www.verizon.com/business/products/plans/">https://www.verizon.com/business/products/plans/</a>:</p></div></div></div>

Claim	Public Documentation
	<div><div><div><div>PersonalBusiness</div><div>SupportStores</div></div><div><div>✓</div><div>MobileInternetSolutionsResourcesContact UsWhy Verizon</div><div>Log InSearch</div></div></div><div><div>Business / Products / Plans</div><div>Call Sales: 1.888.789.1223Contact sales</div></div><div><h1>Plans for your business</h1><p>From mobile networks to internet connectivity and cybersecurity protection, we have plans to fit your business needs.</p></div><div><div>Mobile plansFios internet plansVoice plans</div><div><h2>Business Unlimited Mobility Plans</h2><p>Our Business Unlimited plans provide mobility built for getting work done, with the 5G, data and performance your business needs.</p><div><div>View detailsOff</div><div><div><h3>Business Unlimited Start 5G</h3><p>Get the essentials</p><p>As low as \$30/line ⓘ</p><p>Get started</p></div><div><h3>Business Unlimited Plus 5G</h3><p>Boost your productivity</p><p>As low as \$40/line ⓘ</p><p>Get started</p></div><div><h3>Business Unlimited Pro 5G</h3><p>Get more of what you need</p><p>As low as \$45/line ⓘ</p><p>Get started</p></div></div></div></div></div></div>


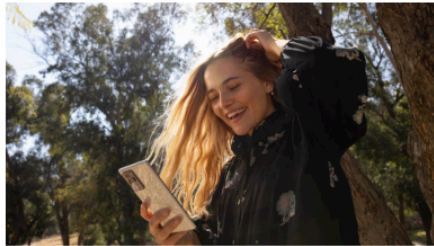



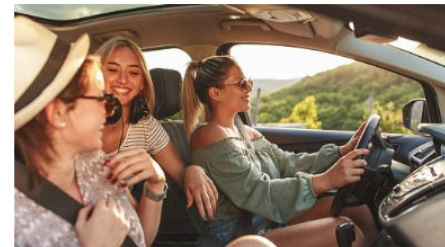
; <https://www.verizon.com/support/knowledge-base-212894/>;

Claim	Public Documentation
	<p data-bbox="606 272 953 297"><a href="#">Support</a> &gt; <a href="#">Apple</a> &gt; <a href="#">Apple iPhone 15</a></p> <h1 data-bbox="638 370 1661 513">Apple iPhone - Update Carrier Settings</h1> <div data-bbox="642 597 1950 1094"><p data-bbox="688 643 772 667"><b>NOTE</b></p><ul data-bbox="730 704 1898 1024" style="list-style-type: none"><li data-bbox="730 704 1898 862">• Carrier settings updates are small files that are installed on iOS devices. The carrier settings include updates to Access Point Names (APNs), MMS settings, features like tethering and default apps. Having the most up to date carrier settings is recommended for the proper functionality of the device.</li><li data-bbox="730 906 1898 1024">• Apple® Watch® Series 3 users must be on Carrier Bundle 29.1 or higher (check on your iPhone® via <b>Settings</b> &gt; <b>General</b> &gt; <b>About</b> &gt; <b>Carrier</b>). For more info on how to check carrier and / or update your Carrier version, refer to Updating Your Carrier Settings</li></ul></div> <ol data-bbox="646 1159 1675 1393" style="list-style-type: none"><li data-bbox="646 1159 1675 1256">1. From a Home screen on your <b>Settings</b>  &gt; <b>General</b>.<ul data-bbox="722 1192 1675 1256" style="list-style-type: none"><li data-bbox="722 1192 1325 1219">→ If unavailable, swipe left to access the App Library.</li><li data-bbox="722 1224 1675 1256">→ If a carrier settings update is available, you're presented with an option to update.</li></ul></li><li data-bbox="646 1295 1356 1393">2. Tap <b>About</b>.<ul data-bbox="722 1328 1356 1393" style="list-style-type: none"><li data-bbox="722 1328 1356 1356">→ If an update is available, an option appears to update.</li><li data-bbox="722 1360 1356 1393">→ To view the current carrier info, refer to <a href="#">View Carrier</a>.</li></ul></li></ol>

Claim	Public Documentation
	<p data-bbox="588 245 1948 313"><a href="https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/">https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/</a>:</p> <div data-bbox="583 349 1988 1011"></div> <p data-bbox="588 1027 1688 1057"><a href="https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family:">https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family:</a></p>

Claim	Public Documentation
	 <p>The screenshot displays the Verizon Smart Family website. At the top, there is a navigation bar with links for 'Personal', 'Business', and 'Looking for Business? X'. To the right are links for 'Stores' and 'Español'. Below this is a dark header featuring the Verizon checkmark logo, navigation links for 'Shop', 'Why Verizon', and 'Support', and a 'Sign in' button with a shopping bag icon and a search bar. A promotional banner below the header reads: 'Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a>'. The main content area is titled 'Verizon Smart Family' and includes sub-navigation for 'Overview', 'Features', 'Pricing', and 'Support', along with a 'Get it now' button. The primary visual is a photograph of a young boy wearing a teal cap and headphones, sitting and looking at a white smartphone. Overlaid on the left side of the image is the text: 'Peace of mind for you. Freedom for them.'</p>



Claim	Public Documentation
	<div data-bbox="596 251 1026 495"></div> <div data-bbox="588 526 787 563"><b>Block it Out</b></div> <div data-bbox="588 578 1024 625"><p>Keep certain apps and sites blocked until your kid is ready.</p></div> <div data-bbox="1068 251 1499 495"></div> <div data-bbox="1062 526 1423 566"><b>Trusted contacts only</b></div> <div data-bbox="1062 578 1495 691"><p>Make sure they're only texting and chatting with contacts you've approved. Learn more about setting Trusted Contacts by visiting: <a href="https://www.verizon.com/support/how-to-use-verizon-smart-family/">https://www.verizon.com/support/how-to-use-verizon-smart-family/</a>.</p></div> <div data-bbox="1535 251 1976 495"></div> <div data-bbox="1528 526 1890 563"><b>Cut back screen time</b></div> <div data-bbox="1528 578 1974 646"><p>Turn off the web during school hours, bedtime or dinner time so they can focus on what matters most.</p></div> <div data-bbox="596 779 1026 1023"></div> <div data-bbox="588 1055 938 1094"><b>Know where they are</b></div> <div data-bbox="588 1107 1008 1175"><p>Location tracking keeps tabs on your child's phone and sends alerts when they arrive at their destination.</p></div> <div data-bbox="1068 779 1499 1023"></div> <div data-bbox="1062 1055 1251 1094"><b>Pick me up</b></div> <div data-bbox="1062 1107 1499 1153"><p>Kids can request and share location with their parents.</p></div> <div data-bbox="1535 779 1976 1023"></div> <div data-bbox="1528 1055 1869 1128"><b>View their driving or passenger activity</b></div> <div data-bbox="1528 1140 1974 1187"><p>Keep your mind at ease whether your kids are on the bus, carpooling or driving.</p></div> <div data-bbox="577 1214 1992 1287"><p>; <a href="https://www.verizon.com/support/knowledge-base-206963/">https://www.verizon.com/support/knowledge-base-206963/</a>; <a href="https://www.verizon.com/support/knowledge-base-152696/">https://www.verizon.com/support/knowledge-base-152696/</a>; <a href="https://www.verizon.com/support/verizon-smart-family-faqs/">https://www.verizon.com/support/verizon-smart-family-faqs/</a>:</p></div>

## What Verizon Smart Family features are available without downloading the Verizon Smart Family Companion app on my child's device?

Certain features are only available if the [Verizon Smart Family Companion app](#) is installed on your child's smartphone and paired with the Verizon Smart Family app on your device.

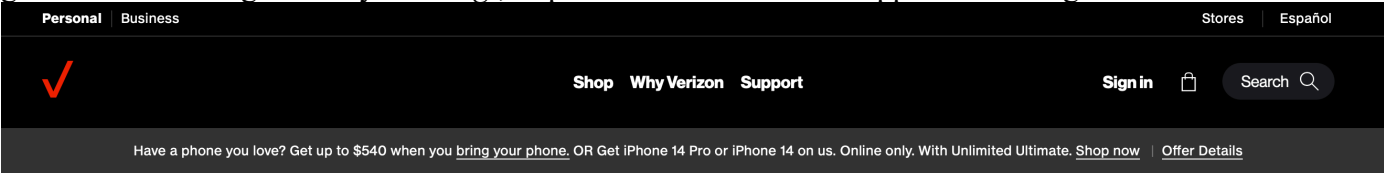

- **Without pairing, you can:**

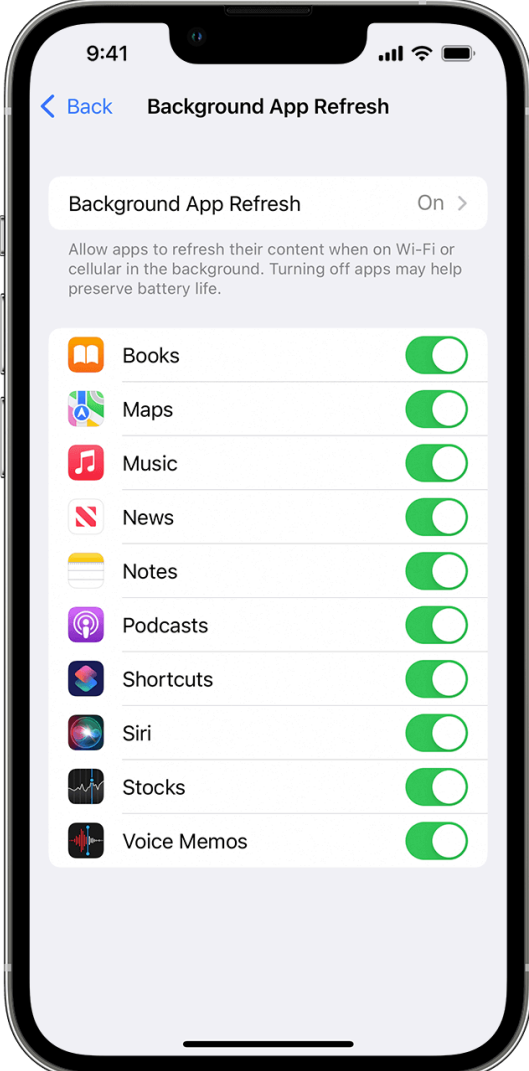
- View call and text activity
- Set time restrictions on texts, calls and data usage\*
- Set data limits\*
- Set text, call and purchase limits
- Get access to the device's network location

Note: Network location accuracy may vary up to a few miles.

- **You must pair to:**

- Set content filters
- Monitor web and app activity
- Pause internet access
- Set time restrictions on Wi-Fi usage
- Locate family members and set location alerts with the best location accuracy
- Use the location check-in feature, where family members can send you their precise location when they arrive at their destination
- Use the **Pick Me Up** feature that lets your child send a request for a ride to a parent line

Claim	Public Documentation
<p>[1e] and if it is determined that the service usage activity is the back-ground activity, apply the policy.</p>	<p>The Accused Instrumentalities comprise “and if it is determined that the service usage activity is the back-ground activity, apply the policy.”</p> <p>For example, Apple’s devices, including the iPhone 15 Pro, run the Apple iOS Operating System, which comprise at least Apple’s “Background App Refresh” and “Low Power Mode” settings apply the policy to back-ground service usage activity. <i>See, e.g.</i>, <a href="https://www.verizon.com/support/knowledge-base-207174/">https://www.verizon.com/support/knowledge-base-207174/</a>:</p>  <p><a href="#">Support</a> &gt; <a href="#">Apple</a> &gt; <a href="#">Apple iPhone 7 Plus</a></p> <h2>Apple iPhone - Turn Background App Refresh On / Off</h2> <div data-bbox="630 917 1407 1039"> <p><b>NOTE</b></p> <p>When Background App Refresh is turned on, apps that take advantage of this feature can refresh themselves in the background. For additional info, refer to <a href="#">multitasking and background app refresh</a>.</p> </div> <ol style="list-style-type: none"> <li>From a Home screen on your <b>Settings</b>  <b>General</b>. → If an app isn't available on your Home screen, swipe left to access the App Library.</li> <li>Tap <b>Background App Refresh</b> twice then tap one of the following: → When low power mode is on, the background app refresh is disabled. <ul style="list-style-type: none"> <li>Off</li> <li>Wi-Fi</li> <li>Wi-Fi and Cellular Data</li> </ul> </li> </ol> <p><a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>

Claim	Public Documentation																						
	<div data-bbox="596 305 1299 363"><h2>Use Background App Refresh</h2></div> <div data-bbox="596 391 1379 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="596 672 1375 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="575 1373 1148 1411"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1417 259 1971 1339"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays the time 9:41, signal strength, and battery level. The settings page has a navigation bar with a back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is currently turned on. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on:</p><table border="1"><thead><tr><th>App</th><th>Background App Refresh</th></tr></thead><tbody><tr><td>Books</td><td>On</td></tr><tr><td>Maps</td><td>On</td></tr><tr><td>Music</td><td>On</td></tr><tr><td>News</td><td>On</td></tr><tr><td>Notes</td><td>On</td></tr><tr><td>Podcasts</td><td>On</td></tr><tr><td>Shortcuts</td><td>On</td></tr><tr><td>Siri</td><td>On</td></tr><tr><td>Stocks</td><td>On</td></tr><tr><td>Voice Memos</td><td>On</td></tr></tbody></table></div>	App	Background App Refresh	Books	On	Maps	On	Music	On	News	On	Notes	On	Podcasts	On	Shortcuts	On	Siri	On	Stocks	On	Voice Memos	On
App	Background App Refresh																						
Books	On																						
Maps	On																						
Music	On																						
News	On																						
Notes	On																						
Podcasts	On																						
Shortcuts	On																						
Siri	On																						
Stocks	On																						
Voice Memos	On																						

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

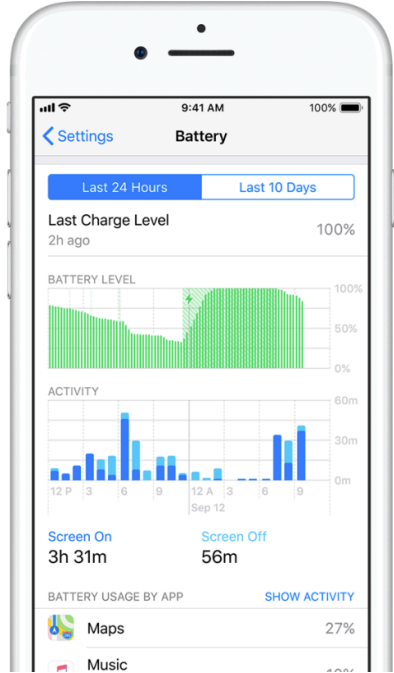
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

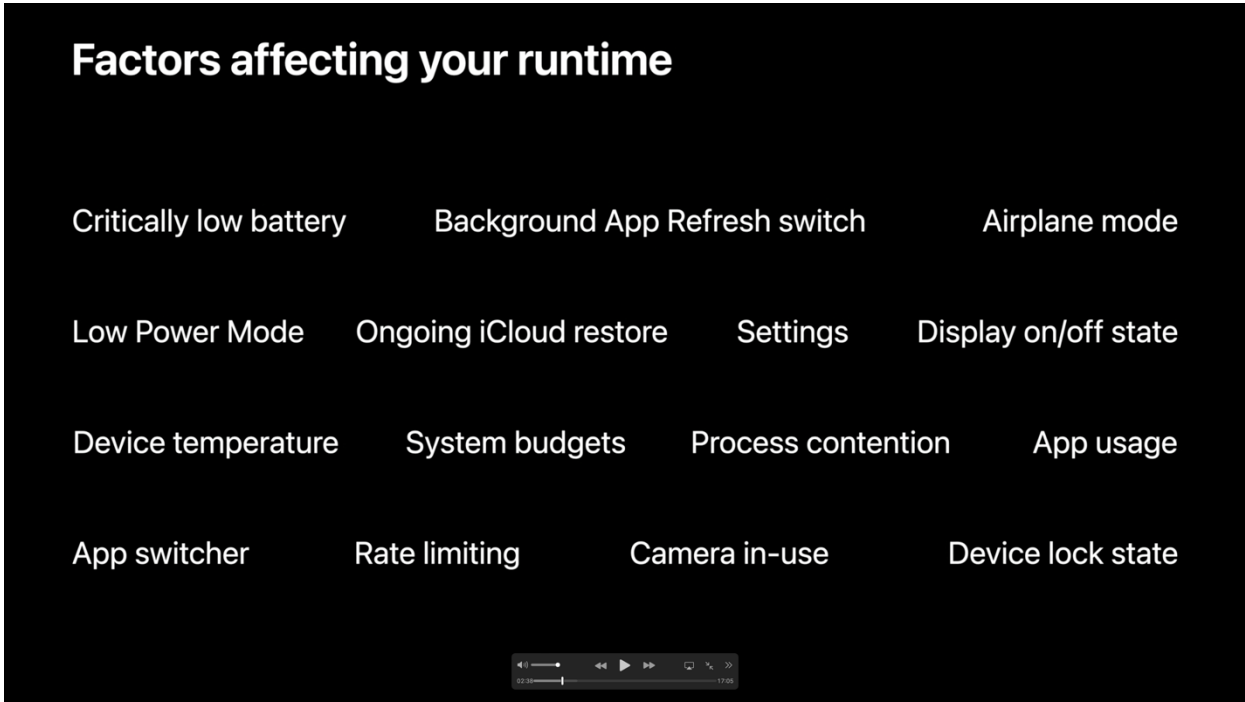
Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1396 358">View Battery Usage information</h2> <p data-bbox="625 378 1318 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 586">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 656 1293 748"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 776 1318 1024" style="list-style-type: none"> <li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li> <li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li> </ul>  <p data-bbox="588 1068 1738 1101">; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate</a>:</p>










Claim	Public Documentation
	<p data-bbox="625 250 867 280">Instance Property</p> <h2 data-bbox="625 318 1033 375">applicationState</h2> <p data-bbox="625 401 1329 431">The app's current state, or that of its most active scene.</p> <div data-bbox="625 472 1388 503"> <span>iOS 4.0+</span> <span>iPadOS 4.0+</span> <span>Mac Catalyst 13.1+</span> <span>tvOS 9.0+</span> <span>visionOS 1.0+ Beta</span> </div> <pre data-bbox="644 565 1283 589">var applicationState: UIApplication.State { get }</pre> <hr data-bbox="625 662 1955 669"/> <h2 data-bbox="625 729 852 771">Discussion</h2> <p data-bbox="625 802 1465 828">The behavior of this property depends on whether your app is scene-based.</p> <p data-bbox="625 857 1944 992">In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's <code>activationState</code> property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use <code>UISceneDelegate</code> to respond to changes in an individual scene's life cycle.</p> <p data-bbox="625 1023 1955 1193">In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use <code>UIApplicationDelegate</code> to respond to the app's life cycle changes.</p> <p data-bbox="585 1208 1990 1421">; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>;</p>



Claim	Public Documentation
	<p><a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks">https://developer.apple.com/documentation/backgroundtasks</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask">https://developer.apple.com/documentation/backgroundtasks/bgtask</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/state">https://developer.apple.com/documentation/uikit/uiapplication/state</a>; <a href="https://developer.apple.com/documentation/foundation/url_loading_system">https://developer.apple.com/documentation/foundation/url_loading_system</a>; <a href="https://developer.apple.com/documentation/foundation/urlsession">https://developer.apple.com/documentation/foundation/urlsession</a>; <a href="https://developer.apple.com/documentation/avfoundation/avplayer">https://developer.apple.com/documentation/avfoundation/avplayer</a>; <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback</a>; <a href="https://developer.apple.com/videos/play/wwdc2019/707/">https://developer.apple.com/videos/play/wwdc2019/707/</a>; <a href="https://developer.apple.com/videos/play/wwdc2020/10063">https://developer.apple.com/videos/play/wwdc2020/10063</a>;</p>

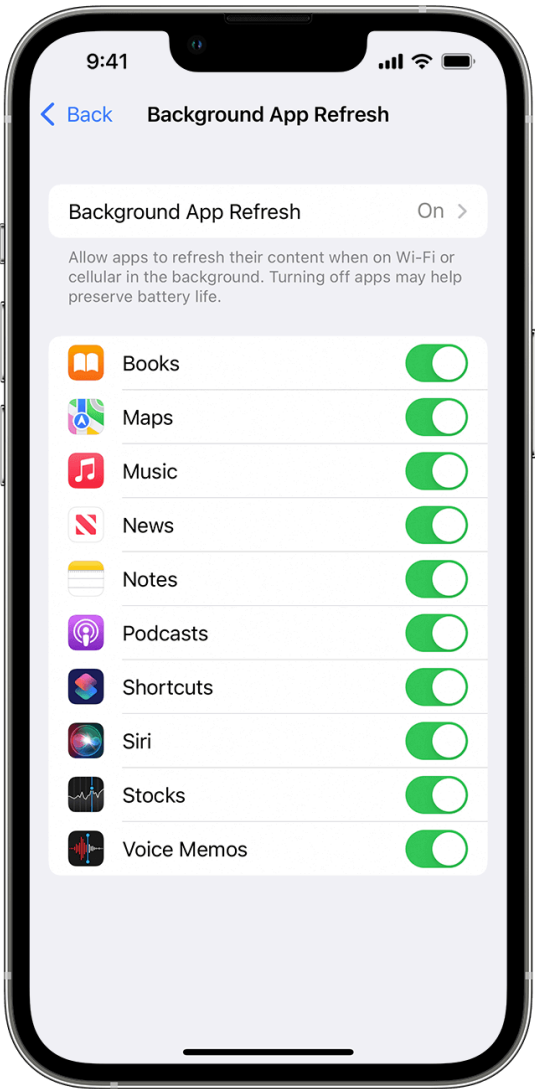


Claim	Public Documentation
	 <p>The screenshot shows a video player interface with a black background and white text. The title 'Factors affecting your runtime' is at the top. Below it, a grid of factors is displayed:</p> <ul style="list-style-type: none"><li>Critically low battery</li><li>Background App Refresh switch</li><li>Airplane mode</li><li>Low Power Mode</li><li>Ongoing iCloud restore</li><li>Settings</li><li>Display on/off state</li><li>Device temperature</li><li>System budgets</li><li>Process contention</li><li>App usage</li><li>App switcher</li><li>Rate limiting</li><li>Camera in-use</li><li>Device lock state</li></ul> <p>A video player control bar is visible at the bottom of the screenshot, showing a progress bar and a timestamp of 17:08.</p>

Claim	Public Documentation
	<div data-bbox="583 240 1822 938"><h3>Top factors</h3><ul style="list-style-type: none"><li> Critically low battery</li><li> Low Power Mode</li><li> App usage</li><li> App switcher</li><li> Background App Refresh switch</li><li> System budgets</li><li> Rate limiting</li></ul></div>

Claim	Public Documentation
	 <p>Three Apple Watch screens are shown side-by-side. The first screen displays the 'Settings' menu with options for General, Do Not Disturb, and Airplane Mode. The second screen displays the 'General' settings menu with options for Software Update, Orientation, Background App Refresh, and Wake Screen. The third screen displays the 'Background App Refresh' settings menu, showing a toggle switch for 'Background App Refresh' which is currently turned off. Below the toggle, text explains that turning off this feature may preserve battery life and that apps with complications will continue to refresh even when the setting is off.</p> <p>; see also, e.g., <a href="https://www.verizon.com/plans/">https://www.verizon.com/plans/</a>; <a href="https://www.verizon.com/business/products/plans/">https://www.verizon.com/business/products/plans/</a>; <a href="https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/">https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/</a>; <a href="https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family/">https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family/</a>; <a href="https://www.verizon.com/support/knowledge-base-206963/">https://www.verizon.com/support/knowledge-base-206963/</a>; <a href="https://www.verizon.com/support/knowledge-base-152696/">https://www.verizon.com/support/knowledge-base-152696/</a>; <a href="https://www.verizon.com/support/verizon-smart-family-faqs/">https://www.verizon.com/support/verizon-smart-family-faqs/</a>.</p>
<p>2. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application component or at least a portion of an operating system component, and wherein the one or more prospective or successful communications</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application component or at least a portion of an operating system component, and wherein the one or more prospective or successful communications over the wireless network comprise an update to the first software component.”</p> <p>See, for example, the disclosures identified for claim 1.</p>

Claim	Public Documentation
over the wireless network comprise an update to the first software component.	As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i> , <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a> :

Claim	Public Documentation																						
	<div data-bbox="606 305 1297 362"><h2>Use Background App Refresh</h2></div> <div data-bbox="606 391 1377 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="606 670 1373 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1146 1411"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 259 1969 1341"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays the time 9:41, signal strength, and battery level. The navigation bar has a blue back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is turned on, with a right arrow next to it. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on:</p><table border="1"><thead><tr><th>App</th><th>Toggle</th></tr></thead><tbody><tr><td>Books</td><td>On</td></tr><tr><td>Maps</td><td>On</td></tr><tr><td>Music</td><td>On</td></tr><tr><td>News</td><td>On</td></tr><tr><td>Notes</td><td>On</td></tr><tr><td>Podcasts</td><td>On</td></tr><tr><td>Shortcuts</td><td>On</td></tr><tr><td>Siri</td><td>On</td></tr><tr><td>Stocks</td><td>On</td></tr><tr><td>Voice Memos</td><td>On</td></tr></tbody></table></div>	App	Toggle	Books	On	Maps	On	Music	On	News	On	Notes	On	Podcasts	On	Shortcuts	On	Siri	On	Stocks	On	Voice Memos	On
App	Toggle																						
Books	On																						
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## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

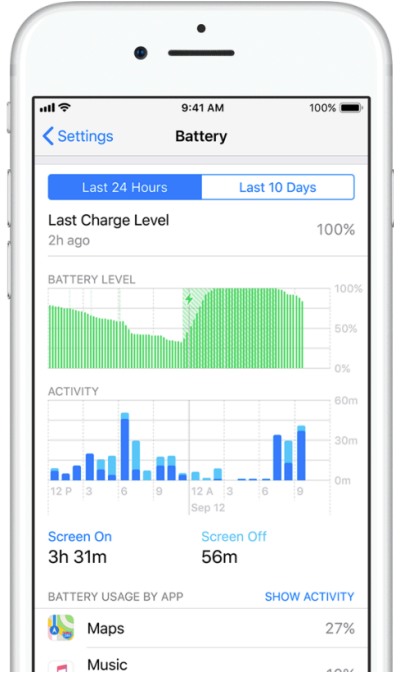
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



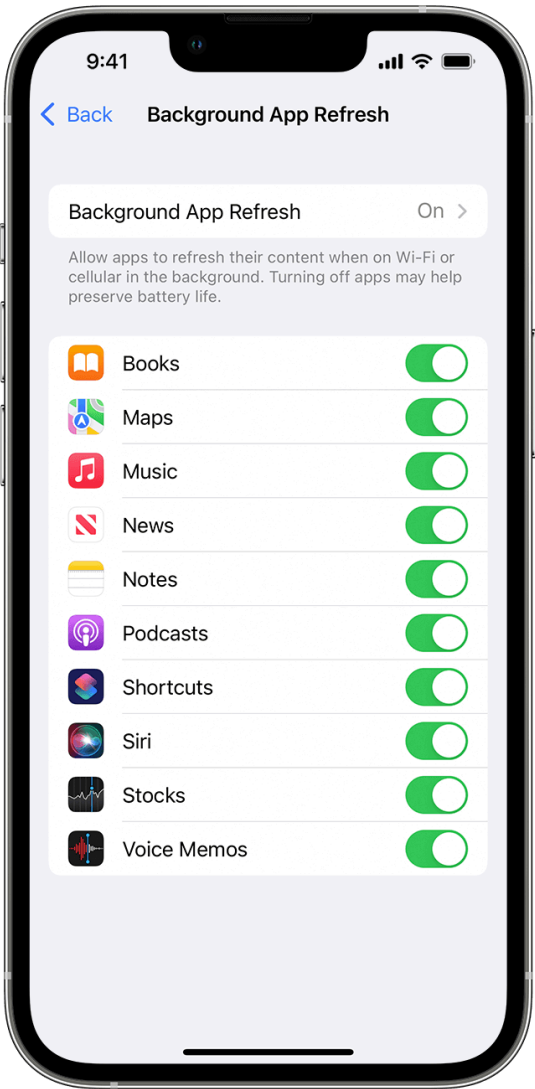
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1396 358">View Battery Usage information</h2> <p data-bbox="625 378 1316 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 584">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 654 1293 743"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 776 1316 1023" style="list-style-type: none"> <li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li> <li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li> </ul>  <p data-bbox="583 1071 1990 1429">; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>; <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks</a></p>

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	<a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask</a> ; <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask</a> ; <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask">https://developer.apple.com/documentation/backgroundtasks/bgtask</a> ; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/</a> ; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/</a> .
<p>3. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a network access, background signaling, a cloud synchronization service, an information feed, a download, an e-mail, a chat client, a security update, a peer-to-peer networking application update, a report of a behavior associated with the wireless end-user device, or a combination of these.</p>	<p>The Accused Instrumentalities comprise the “the one or more prospective or successful communications over the wireless network comprise a communication associated with a network access, background signaling, a cloud synchronization service, an information feed, a download, an e-mail, a chat client, a security update, a peer-to-peer networking application update, a report of a behavior associated with the wireless end-user device, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>



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	<div data-bbox="594 305 1299 363"><h2>Use Background App Refresh</h2></div> <div data-bbox="594 391 1379 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="594 672 1375 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="573 1373 1148 1411"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1417 259 1971 1339"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar shows the time as 9:41 and signal strength. The page has a 'Back' button and a title 'Background App Refresh'. Below the title, there is a toggle switch labeled 'Background App Refresh' which is currently turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is displayed, each with a toggle switch to its right. All the listed apps have their background refresh toggles turned on (green). The apps listed are: Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


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To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

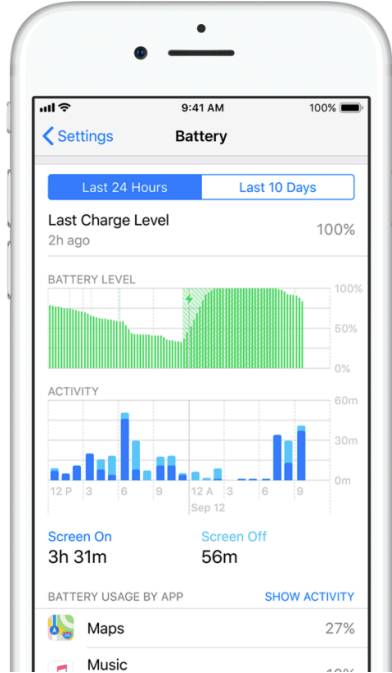
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
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- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
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When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

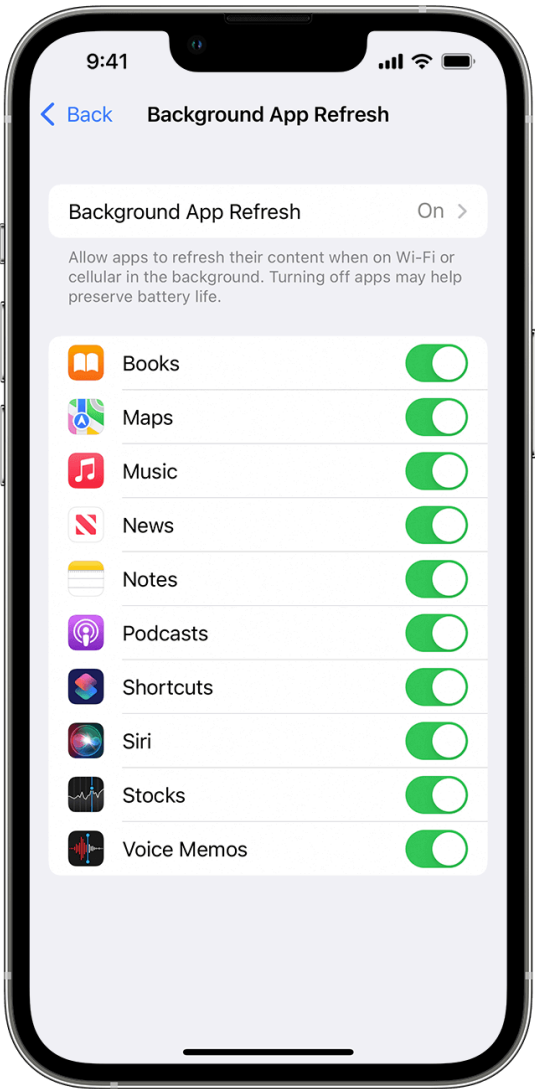


1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

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<p>4. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a content update or a content download.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a content update or a content download.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>

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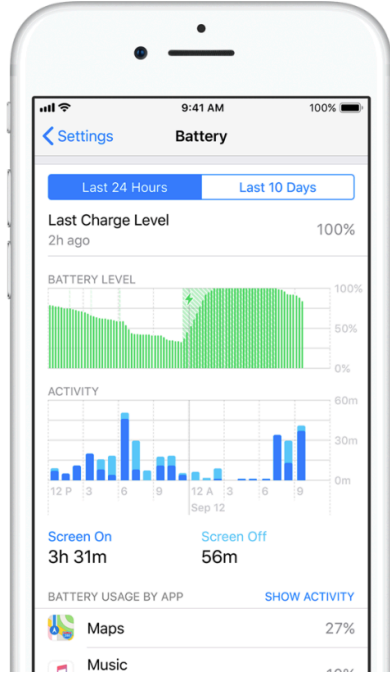
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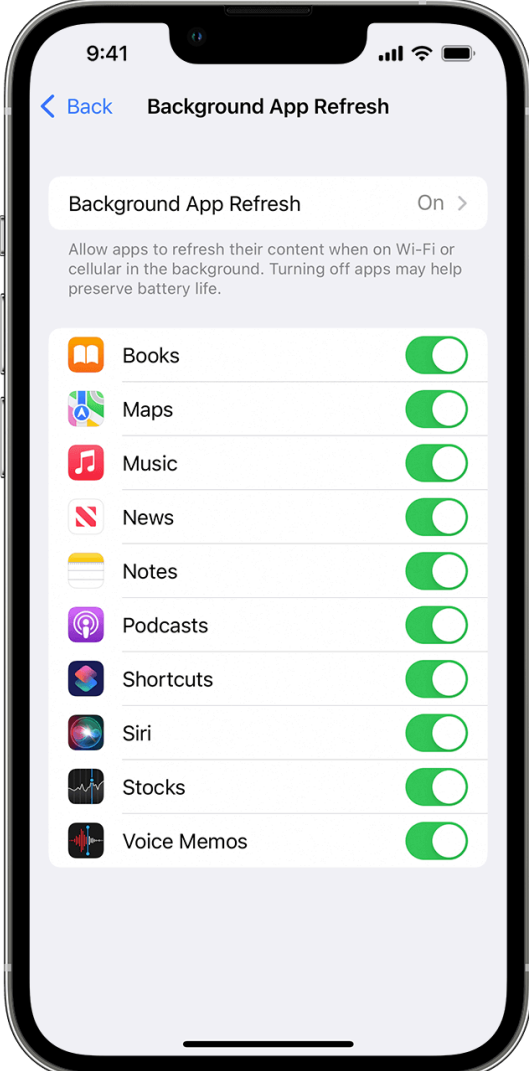
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Claim	Public Documentation
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<p>5. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with an image, music, a video, an electronic book, an e-mail attachment, a content or media subscription, a news feed, a text message, a video chat, or a combination of these.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with an image, music, a video, an electronic book, an e-mail attachment, a content or media subscription, a news feed, a text message, a video chat, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>



Claim	Public Documentation
	<div data-bbox="594 305 1299 363"><h2>Use Background App Refresh</h2></div> <div data-bbox="594 391 1379 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="594 672 1375 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="573 1373 1148 1411"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1417 259 1971 1339"></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

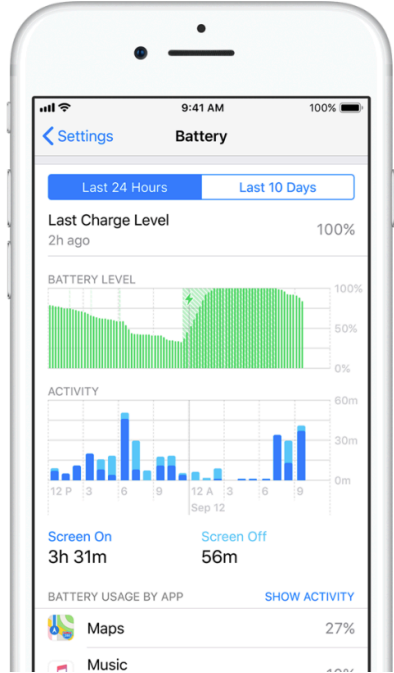
- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.

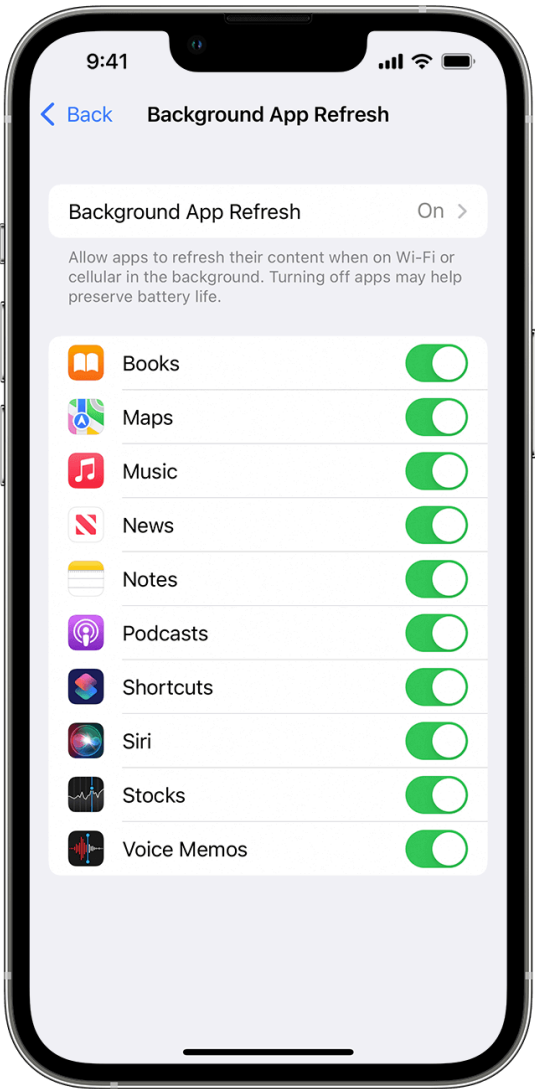


1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
	<p><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1398 358">View Battery Usage information</h2> <p data-bbox="625 378 1318 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 584">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 654 1293 743"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 776 1318 1023" style="list-style-type: none"> <li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li> <li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li> </ul>  <p data-bbox="583 1073 1990 1429">; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>; <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks</a></p>

Claim	Public Documentation
	<a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask</a> ; <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask</a> ; <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask">https://developer.apple.com/documentation/backgroundtasks/bgtask</a> ; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/</a> ; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/</a> .
<p>6. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a device application or widget, a device operating system function, a file download, streaming media, a software update, a firmware update, a website, a connection to a server, a web browser, or a synchronization service.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise a communication associated with a device application or widget, a device operating system function, a file download, streaming media, a software update, a firmware update, a website, a connection to a server, a web browser, or a synchronization service.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise prospective or successful communications by applications or portions of applications (e.g., by “checking for updates and new content”) over wireless networks to “refresh in the background,” perform “Automatic downloads,” “Email fetch,” “temporarily pause” iCloud photos, “prevent[] some apps from sending or receiving data in the background,” “apps running in the background may not receive updates,” etc. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>

Claim	Public Documentation
	<div data-bbox="606 305 1297 362"><h2>Use Background App Refresh</h2></div> <div data-bbox="606 391 1377 638"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="606 672 1373 878"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1146 1411"><p><a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 259 1969 1341"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays the time 9:41, signal strength, and battery level. The navigation bar has a blue back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on (green): Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


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Low Power Mode reduces or affects these features:


- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

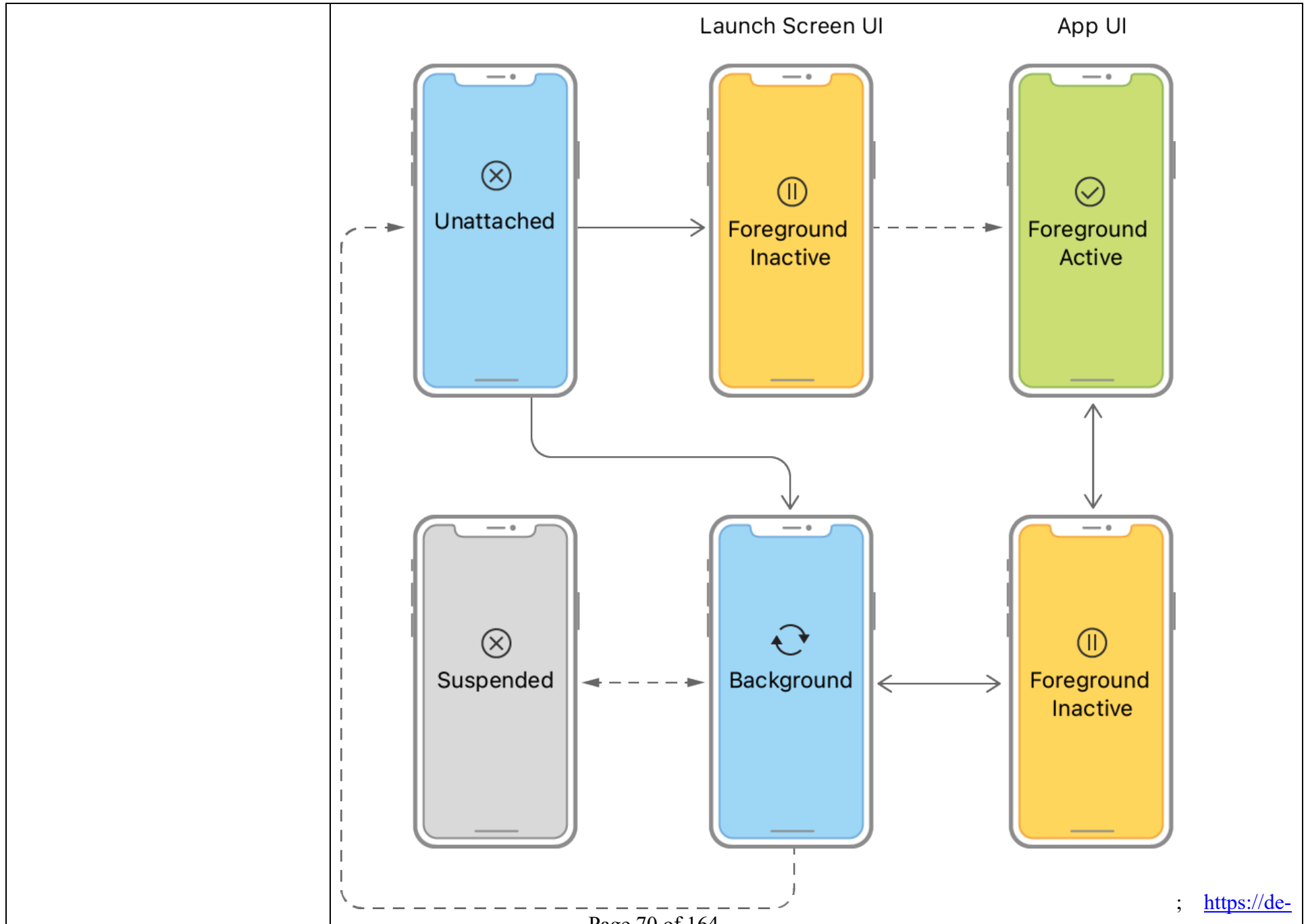
Claim	Public Documentation
	<p data-bbox="588 243 1352 276"><a href="https://www.apple.com/batteries/maximizing-performance/">https://www.apple.com/batteries/maximizing-performance/</a>:</p> <h2 data-bbox="625 305 1396 357">View Battery Usage information</h2> <p data-bbox="625 378 1316 500">With iOS, you can easily manage your device's battery life, because you can see the proportion of your battery used by each app (unless the device is charging). To view your usage, go to Settings &gt; Battery.</p> <p data-bbox="625 527 1293 584">Here are the messages you may see listed below the apps you've been using:</p> <p data-bbox="625 654 1293 743"><b>Background Activity.</b> This indicates that the battery was used by the app while it was in the background — that is, while you were using another app.</p> <ul data-bbox="657 776 1316 1023" style="list-style-type: none"><li>• To improve battery life, you can turn off the feature that allows apps to refresh in the background. Go to Settings &gt; General &gt; Background App Refresh and select Wi-Fi, Wi-Fi &amp; Cellular Data, or Off to turn off Background App Refresh entirely.</li><li>• If the Mail app lists Background Activity, you can choose to fetch data manually or increase the fetch interval. Go to Settings &gt; Accounts &amp; Passwords &gt; Fetch New Data.</li></ul>  <p data-bbox="588 1068 1990 1393">; <a href="https://developer.apple.com/documentation/avfoundation/avplayer">https://developer.apple.com/documentation/avfoundation/avplayer</a>; <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback</a>; <a href="https://support.apple.com/en-us/HT207122">https://support.apple.com/en-us/HT207122</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/about_the_background_execution_sequence/</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/">https://developer.apple.com/documentation/uikit/app_and_environment/scenes/preparing_your_ui_to_run_in_the_background/extending_your_app_s_background_execution_time/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/">https://developer.apple.com/documentation/backgroundtasks/</a>; <a href="https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/">https://developer.apple.com/documentation/watchkit/background_execution/using_background_tasks/</a>;</p>

Claim	Public Documentation
	<p><a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/">https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_background/using_background_tasks_to_update_your_app/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/">https://developer.apple.com/documentation/backgroundtasks/refreshing_and_maintaining_your_app_using_background_tasks/</a>; <a href="https://developer.apple.com/documentation/backgroundtasks">https://developer.apple.com/documentation/backgroundtasks</a> <a href="https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask;">https://developer.apple.com/documentation/backgroundtasks/bgapprefreshtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask;">https://developer.apple.com/documentation/backgroundtasks/bgprocessingtask</a>; <a href="https://developer.apple.com/documentation/backgroundtasks/bgtask;">https://developer.apple.com/documentation/backgroundtasks/bgtask</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/">https://developer.apple.com/documentation/uikit/uiapplication/1622976-backgroundfetchintervalminimum/</a>; <a href="https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/">https://developer.apple.com/documentation/uikit/uiapplication/1622994-backgroundrefreshstatus/</a>.</p>
<p>7. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify an intention to launch or start the first software component.</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify an intention to launch or start the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p> <p>As a further example, the Accused Instrumentalities comprise identifying an intention to launch or start the first software component. <i>See, e.g.</i>, <a href="https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate">https://developer.apple.com/documentation/uikit/uiapplication/1623003-applicationstate</a>:</p>



Claim	Public Documentation
	<div><div>Instance Property</div><div><h2>applicationState</h2><p>The app's current state, or that of its most active scene.</p><div>iOS 4.0+ iPadOS 4.0+ Mac Catalyst 13.1+ tvOS 9.0+ visionOS 1.0+ Beta</div><div><pre>var applicationState: UIApplication.State { get }</pre></div></div><div><h2>Discussion</h2><p>The behavior of this property depends on whether your app is scene-based.</p><p>In a scene-based app, this property takes the value of the most active scene, which it determines from each scene's <a href="#">activationState</a> property. A scene-based app launches in the background state, and transitions between its states as scenes connect, change their states, and disconnect. For scene-based apps, use <a href="#">UISceneDelegate</a> to respond to changes in an individual scene's life cycle.</p><p>In a sceneless app, the property's value is always the app's current state. The app is inactive at launch, and then is generally in either an active or background state. The app may become inactive for a short period — for example, when transitioning between active and background states, when the system presents an alert in front of it, or when the system displays the application switcher. For sceneless apps, use <a href="#">UIApplicationDelegate</a> to respond to the app's life cycle changes.</p><p>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle">https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle</a>:</p></div></div>

Claim	Public Documentation
	<div data-bbox="590 240 1822 612"><h1 data-bbox="600 256 1703 334">Managing Your App's Life Cycle</h1><p data-bbox="600 370 1728 521">Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div data-bbox="590 696 871 753"><h2 data-bbox="600 703 863 753">Overview</h2></div> <div data-bbox="590 795 1770 1081"><p data-bbox="600 800 1770 1076">The current state of your app determines what it can and cannot do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it is offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div>



Claim	Public Documentation
	<p data-bbox="590 245 1577 310"><a href="https://developer.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_foreground/">veloper.apple.com/documentation/uikit/windows_and_screens/scenes/preparing_your_ui_to_run_in_the_foreground/</a>:</p> <div data-bbox="590 315 1822 480"><h2 data-bbox="598 321 1583 375">Preparing Your UI to Run in the Foreground</h2><p data-bbox="598 394 1066 423">Configure your app to appear onscreen.</p></div> <h3 data-bbox="598 540 779 578">Overview</h3> <p data-bbox="598 605 1806 727">Use foreground transitions to prepare your app's UI to appear onscreen. An app's transition to the foreground is usually in response to a user action. For example, when the user taps the app's icon, the system launches the app and brings it to the foreground. Use a foreground transition to update your app's UI, acquire resources, and start the services you need to handle user requests.</p>

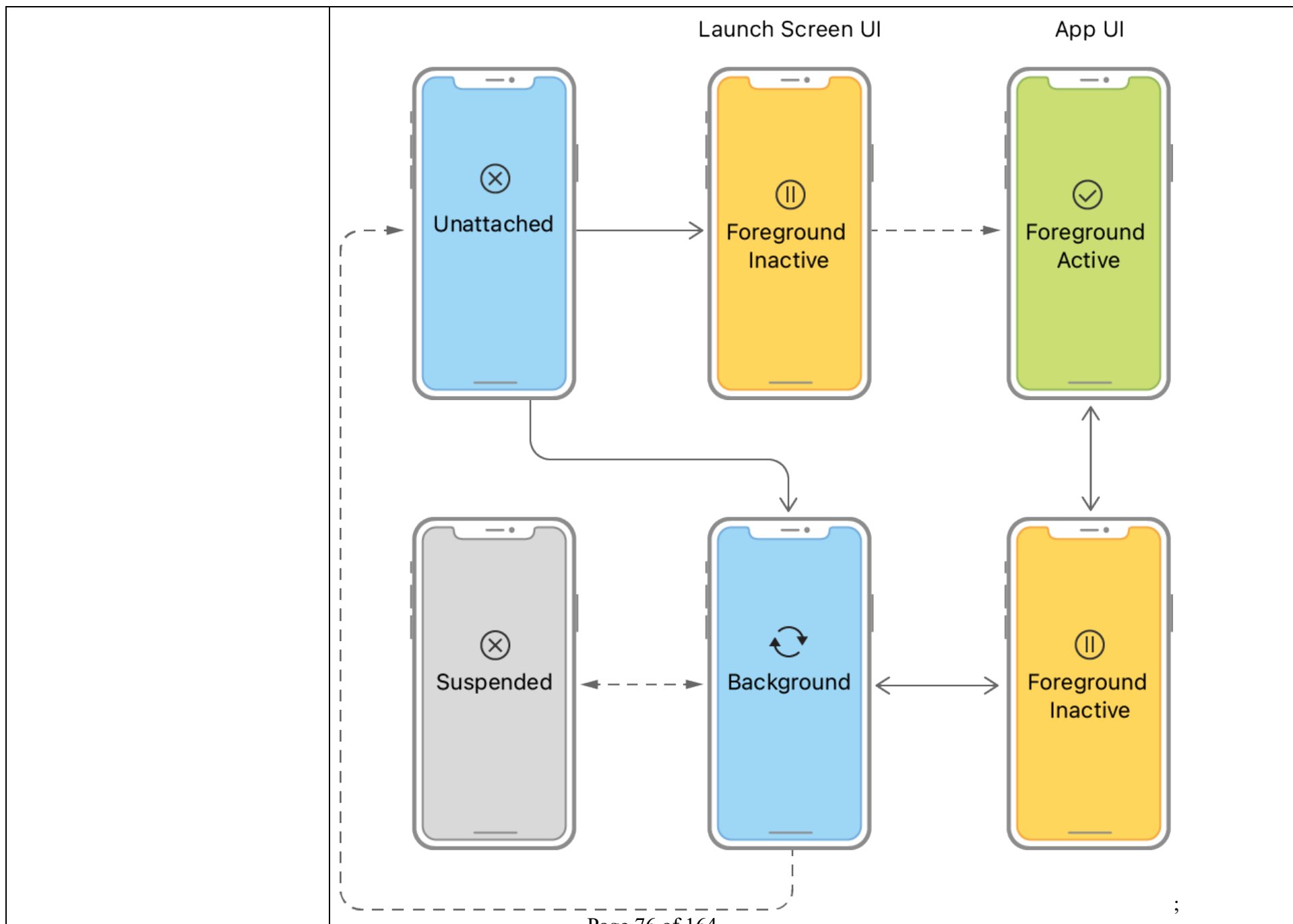
Claim	Public Documentation
	<p><b>Configure Your User Interface and Initial Tasks at Activation</b></p> <p>The system moves your app to the active state immediately before displaying the app’s UI. Activation is a good time to configure your app’s UI and runtime behavior; specifically:</p> <ul style="list-style-type: none"> <li>• Show your app’s windows, if needed.</li> <li>• Change the currently visible view controller, if needed.</li> <li>• Update the data values and state of views and controls.</li> <li>• Display controls to resume a paused game.</li> <li>• Start or resume any dispatch queues that you use to execute tasks.</li> <li>• Update data source objects.</li> <li>• Start timers for periodic tasks.</li> </ul> <p>Put your configuration code in one of the following methods:</p> <ul style="list-style-type: none"> <li>• For a scene-based UI—The <code>sceneDidBecomeActive(_:)</code> method of the appropriate scene delegate object.</li> <li>• For all other apps—The <code>applicationDidBecomeActive(_:)</code> method of your app delegate object.</li> </ul> <p>Activation is also the time to put finishing touches on your UI before displaying it to the user. Don’t run any code that might block your activation method. Instead, make sure you have everything you need in advance. For example, if your data changes frequently outside of the app, use background tasks to fetch updates from the network before your app returns to the foreground. Otherwise, be prepared to display existing data while you fetch changes asynchronously.</p>
<p>8. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify: an application identifier associated with the service usage activity or the first software component, an operating system function identifier associated with the service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.”</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify: an application identifier associated with the service usage activity or the first software component, an operating system function identifier associated with the service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6.</p> <p>As a further example, the Accused Instrumentalities comprise application identifiers, processes, delegates, objects, scenes, task identifiers, etc. <i>See, e.g.</i>,</p>

Claim	Public Documentation
<p>service usage activity or the first software component, an aggregate service activity identifier, a component service activity identifier, or a combination of these.</p>	<p><a href="https://developer.apple.com/help/account/manage-identifiers/register-an-app-id/">https://developer.apple.com/help/account/manage-identifiers/register-an-app-id/</a>:</p> <p><b>Manage identifiers</b></p> <h2>Register an App ID</h2> <p>An <i>App ID</i> identifies your app in a provisioning profile. It is a two-part string used to identify one or more apps from a single development team. There are two types of <a href="#">App IDs</a>: an explicit App ID, used for a single app, and a wildcard App ID, used for a set of apps. The app capabilities enabled for an App ID serve as an allow list of the capabilities one or more apps may use. You can enable app capabilities when you create an App ID or modify these settings later. <a href="#">In-App Purchase</a> is enabled by default for an explicit App ID. Beginning with Xcode 11.4, a single App ID can be used to build iOS, macOS, tvOS, and watchOS apps.</p> <p><b>Note:</b> In order to configure the capabilities an app uses, you need to <a href="#">add them to a target</a> in the Xcode project.</p>

Claim	Public Documentation
	<ol style="list-style-type: none"> <li>1. In <a href="#">Certificates, Identifiers &amp; Profiles</a>, click Identifiers in the sidebar, then click the add button (+) on the top left.</li> <li>2. Select App IDs from the list of options and click continue.</li> <li>3. From the options, confirm App ID type is automatically selected, then click Continue.</li> <li>4. Enter a name or description for the App ID in the Description field.</li> <li>5. To create an explicit App ID, select Explicit App ID and enter the app's <a href="#">bundle ID</a> in the Bundle ID field.  The explicit App ID you enter here should match the bundle ID you entered in the target's Summary pane in Xcode.</li> <li>6. To create a wildcard App ID, select Wildcard App ID and enter a bundle ID suffix in the Bundle ID field.</li> <li>7. Select the corresponding checkboxes to enable the app capabilities you want to use.  The capabilities available to your type of app and program membership appear under Capabilities. A checkbox is disabled if the technology requires an explicit App ID and you're creating a wildcard App ID, or the technology is enabled by default. Not all capabilities are eligible for all platforms.</li> <li>8. Click Continue, then review the registration information, then click Register.</li> </ol> <p>; <a href="https://developer.apple.com/help/account/manage-identifiers/register-an-app-id-for-app-clips">https://developer.apple.com/help/account/manage-identifiers/register-an-app-id-for-app-clips</a>; <a href="https://developer.apple.com/help/account/manage-identifiers/register-a-services-id">https://developer.apple.com/help/account/manage-identifiers/register-a-services-id</a>; <a href="https://developer.apple.com/help/account/manage-identifiers/register-an-app-group">https://developer.apple.com/help/account/manage-identifiers/register-an-app-group</a>; <a href="https://developer.apple.com/help/account/manage-identifiers/create-an-icloud-container">https://developer.apple.com/help/account/manage-identifiers/create-an-icloud-container</a>; <a href="https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle">https://developer.apple.com/documentation/uikit/app_and_environment/managing_your_app_s_life_cycle</a>;</p>

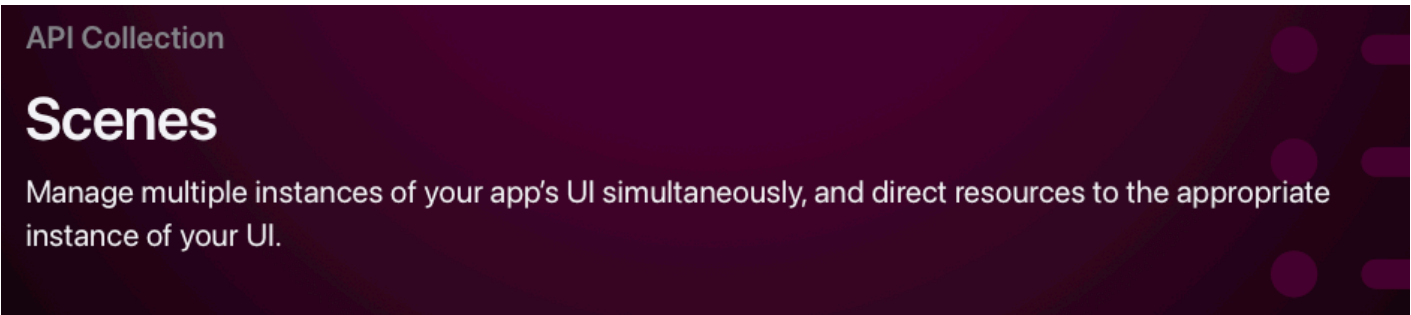
Claim	Public Documentation
	<div data-bbox="590 240 1822 612"><h1 data-bbox="600 256 1703 334">Managing Your App's Life Cycle</h1><p data-bbox="600 370 1728 521">Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div data-bbox="590 699 869 753"><h2 data-bbox="600 699 869 753">Overview</h2></div> <div data-bbox="590 797 1770 1081"><p data-bbox="600 797 1770 1081">The current state of your app determines what it can and cannot do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it is offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div>

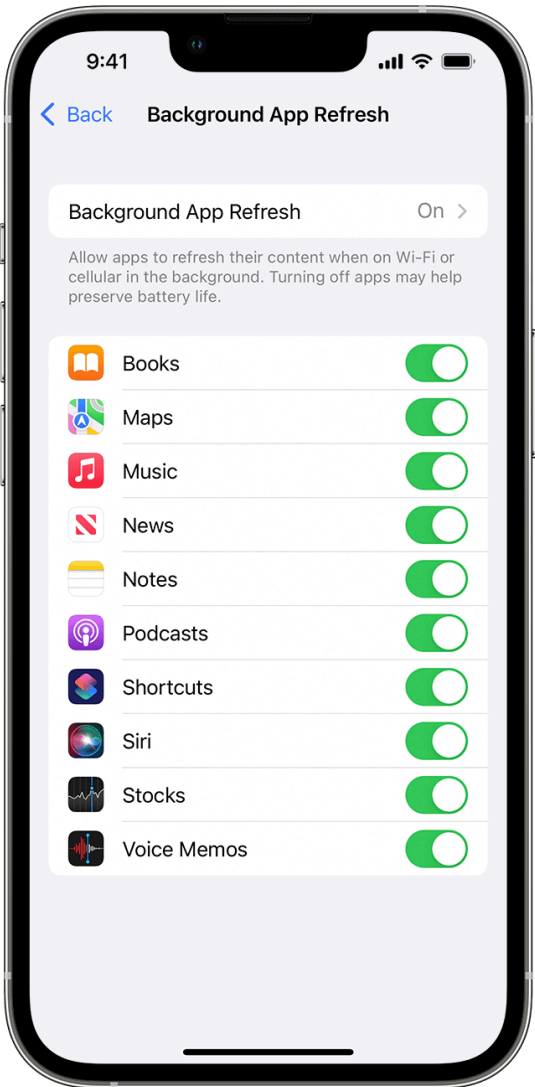




Claim	Public Documentation
	<div data-bbox="617 290 709 321">Article</div> <div data-bbox="617 358 1360 418"><h1>Managing your app's life cycle</h1></div> <div data-bbox="617 440 1913 516"><p>Respond to system notifications when your app is in the foreground or background, and handle other significant system-related events.</p></div> <div data-bbox="617 639 816 682"><h2>Overview</h2></div> <div data-bbox="617 711 1953 849"><p>The current state of your app determines what it can and can't do at any time. For example, a foreground app has the user's attention, so it has priority over system resources, including the CPU. By contrast, a background app must do as little work as possible, and preferably nothing, because it's offscreen. As your app changes from state to state, you must adjust its behavior accordingly.</p></div> <div data-bbox="617 875 1776 904"><p>When your app's state changes, UIKit notifies you by calling methods of the appropriate delegate object:</p></div> <div data-bbox="617 932 1818 1015"><ul style="list-style-type: none"><li>• In iOS 13 and later, use <code>UISceneDelegate</code> objects to respond to life-cycle events in a scene-based app.</li><li>• In iOS 12 and earlier, use the <code>UIApplicationDelegate</code> object to respond to life-cycle events.</li></ul></div> <div data-bbox="642 1089 701 1115"><p>Note</p></div> <div data-bbox="642 1133 1881 1200"><p>If you enable scene support in your app, iOS always uses your scene delegates in iOS 13 and later. In iOS 12 and earlier, the system uses your app delegate.</p></div> <div data-bbox="585 1300 1566 1336"><p><a href="https://developer.apple.com/documentation/uikit/uibackgroundtaskidentifier">https://developer.apple.com/documentation/uikit/uibackgroundtaskidentifier</a>:</p></div>

Claim	Public Documentation
	<div><div>Structure</div><div><h2>UIBackgroundTaskIdentifier</h2><p>A unique token that identifies a request to run in the background.</p><div><div>iOS 4.0+</div><div>iPadOS 4.0+</div><div>Mac Catalyst 13.0+</div><div>tvOS 9.0+</div><div>visionOS 1.0+ Beta</div></div><div><pre>struct UIBackgroundTaskIdentifier</pre></div></div></div> <div><div>Topics</div><div><div>Identifier</div><pre>static let invalid: UIBackgroundTaskIdentifier</pre><p>A token that indicates an invalid task request.</p></div><div><div>Initializers</div><pre>init(rawValue: Int)</pre><p>Creates a new instance with the specified raw value.</p></div></div> <div><a href="https://developer.apple.com/documentation/uikit/app_and_environment/scenes">https://developer.apple.com/documentation/uikit/app_and_environment/scenes:</a></div>

Claim	Public Documentation
	 <p><b>API Collection</b></p> <h2>Scenes</h2> <p>Manage multiple instances of your app's UI simultaneously, and direct resources to the appropriate instance of your UI.</p> <h3>Overview</h3> <p>UIKit manages each instance of your app's UI using a <code>UIWindowScene</code> object. A scene contains the windows and view controllers for presenting one instance of your UI. Each scene also has a corresponding <code>UIWindowSceneDelegate</code> object, which you use to coordinate interactions between UIKit and your app. Scenes run concurrently with each other, sharing the same memory and app process space. As a result, a single app may have multiple scenes and scene delegate objects active at the same time.</p> <p>; <a href="https://developer.apple.com/documentation/bundleresources/information_property_list/bgtaskschedulerpermittedidentifiers">https://developer.apple.com/documentation/bundleresources/information_property_list/bgtaskschedulerpermittedidentifiers</a>.</p>
<p>9[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and at least one other software component, application, process, function, activity, or service, and wherein identify a service usage activity of the wireless end-user device comprises:</p>	<p>The Accused Instrumentalities comprise the “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and at least one other software component, application, process, function, activity, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8.</p> <p>As a further example, the Accused Instrumentalities comprise multiple software components, applications, processes, functions, activities, or services that result in service usage activities, such as the Settings App co-operating with Background App Refresh or Low Power Mode and/or one or more applications on a device resulting in service usage activities. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT202070">https://support.apple.com/en-us/HT202070</a>:</p>

Claim	Public Documentation
	<div data-bbox="604 305 1297 365"><h2>Use Background App Refresh</h2></div> <div data-bbox="604 389 1377 641"><p>After you switch to a different app, some apps run for a short period of time before they're set to a suspended state. Apps that are in a suspended state aren't actively in use, open, or taking up system resources. With Background App Refresh, suspended apps can check for updates and new content.</p></div> <div data-bbox="604 670 1373 880"><p>If you want suspended apps to check for new content, go to Settings &gt; General &gt; Background App Refresh and turn on Background App Refresh. If you quit an app from the app switcher, it might not be able to run or check for new content before you open it again.</p></div> <div data-bbox="588 1377 1161 1412"><p>; <a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p></div> <div data-bbox="1438 259 1969 1339"><p>The screenshot shows the 'Background App Refresh' settings on an iPhone. At the top, the status bar displays the time 9:41, signal strength, and battery level. The navigation bar has a blue back arrow and the title 'Background App Refresh'. Below the title, there is a toggle switch for 'Background App Refresh' which is turned 'On'. A descriptive text states: 'Allow apps to refresh their content when on Wi-Fi or cellular in the background. Turning off apps may help preserve battery life.' Below this, a list of apps is shown with their respective background refresh toggles turned on (green): Books, Maps, Music, News, Notes, Podcasts, Shortcuts, Siri, Stocks, and Voice Memos.</p></div>

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.

Claim	Public Documentation
9[b] identify a data flow to or from the at least one other software component, application, process, function, activity, or service; and	<p>The Accused Instrumentalities further “identify a data flow to or from the at least one other software component, application, process, function, activity, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8, and 9[a].</p>
9[c] associate the data flow with the first software component.	<p>The Accused Instrumentalities further “associate the data flow with the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8, and 9[a]-[b].</p>
10. The non-transitory computer-readable storage medium recited in claim 9, wherein the first software component comprises at least a portion of an application, and wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 9, wherein the first software component comprises at least a portion of an application, and wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, and 8-9.</p>
11. The non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service performs a proxy function.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, and 8-9.</p>
12. The non-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity,	<p>The Accused Instrumentalities comprise “nonnon-transitory computer-readable storage medium recited in claim 9, wherein the at least one other software component, application, process, function, activity, or service comprises a media service manager, an e-mail service manager, a domain name service (DNS) function, a software download service manager, a media download manager, a data download service manager, a media library function, a simple mail transfer protocol (SMTP) proxy, an Internet message access protocol (IMAP)</p>

Claim	Public Documentation
<p>or service comprises a media service manager, an e-mail service manager, a domain name service (DNS) function, a software download service manager, a media download manager, a data download service manager, a media library function, a simple mail transfer protocol (SMTP) proxy, an Internet message access protocol (IMAP) proxy, a post office protocol (POP) proxy, a hypertext transfer protocol (HTTP) proxy, an instant messaging (IM) proxy, a virtual private network (VPN) service manager, or a secure socket layer (SSL) proxy.</p>	<p>proxy, a post office protocol (POP) proxy, a hypertext transfer protocol (HTTP) proxy, an instant messaging (IM) proxy, a virtual private network (VPN) service manager, or a secure socket layer (SSL) proxy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9, as well as the following exemplary citations: <a href="https://developer.apple.com/documentation/networkextension/dns_settings">https://developer.apple.com/documentation/networkextension/dns_settings</a>; <a href="https://developer.apple.com/documentation/avfoundation/avplayer">https://developer.apple.com/documentation/avfoundation/avplayer</a>; <a href="https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback">https://developer.apple.com/documentation/avfoundation/media_playback/configuring_your_app_for_media_playback</a>; <a href="https://developer.apple.com/documentation/devicemanagement/mail">https://developer.apple.com/documentation/devicemanagement/mail</a>; <a href="https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication">https://developer.apple.com/documentation/security/secure_transport/using_the_secure_socket_layer_for_network_communication</a>; <a href="https://developer.apple.com/documentation/networkextension/personal_vpn">https://developer.apple.com/documentation/networkextension/personal_vpn</a>; <a href="https://developer.apple.com/documentation/foundation/nsproxy">https://developer.apple.com/documentation/foundation/nsproxy</a>; <a href="https://developer.apple.com/documentation/messages">https://developer.apple.com/documentation/messages</a>.</p>
<p>13[a]. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
<p>13[b] monitor an application proxy service flow; and</p>	<p>The Accused Instrumentalities further “monitor an application proxy service flow.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
<p>13[c] classify the application proxy service flow as being initiated by or belonging to the first software component.</p>	<p>The Accused Instrumentalities further “classify the application proxy service flow as being initiated by or belonging to the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>







Claim	Public Documentation
14[a]. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[b] associate an identifier identifying the first software component with a request to a proxy service;	<p>The Accused Instrumentalities further “associate an identifier identifying the first software component with a request to a proxy service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[c] associate the request to the proxy service with a traffic flow, the traffic flow comprising the service usage activity; and	<p>The Accused Instrumentalities further “associate the request to the proxy service with a traffic flow, the traffic flow comprising the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
14[d] associate the traffic flow with the identifier.	<p>The Accused Instrumentalities further “associate the traffic flow with the identifier.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
15. The non-transitory computer-readable storage medium recited in claim 14, wherein the identifier comprises a name, a fingerprint, an identification tag, a process number, or a credential.	<p>The Accused Instrumentalities further “non-transitory computer-readable storage medium recited in claim 14, wherein the identifier comprises a name, a fingerprint, an identification tag, a process number, or a credential.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6 and 8-9.</p>
16[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises.”	<p>The Accused Instrumentalities comprises “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity results from cooperation between the first software component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>


Claim	Public Documentation
ware component and a proxy function, and wherein identify a service usage activity of the wireless end-user device comprises:	
16[b] identify a data flow to or from the proxy function; and	The Accused Instrumentalities further “identify a data flow to or from the proxy function.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
16[c] associate the data flow with the first software component.	The Accused Instrumentalities further “associate the data flow with the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
17. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify the service usage activity based on a stream, a flow, a destination, a port, a packet inspection, or a combination of these.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises identify the service usage activity based on a stream, a flow, a destination, a port, a packet inspection, or a combination of these.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.
18. The non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises determine an identifier associated with the first software component, a number associated with the first software component, a name associated with the first software component, or a signature associated with the first software component.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein identify a service usage activity of the wireless end-user device comprises determine an identifier associated with the first software component, a number associated with the first software component, a name associated with the first software component, or a signature associated with the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, and 14.

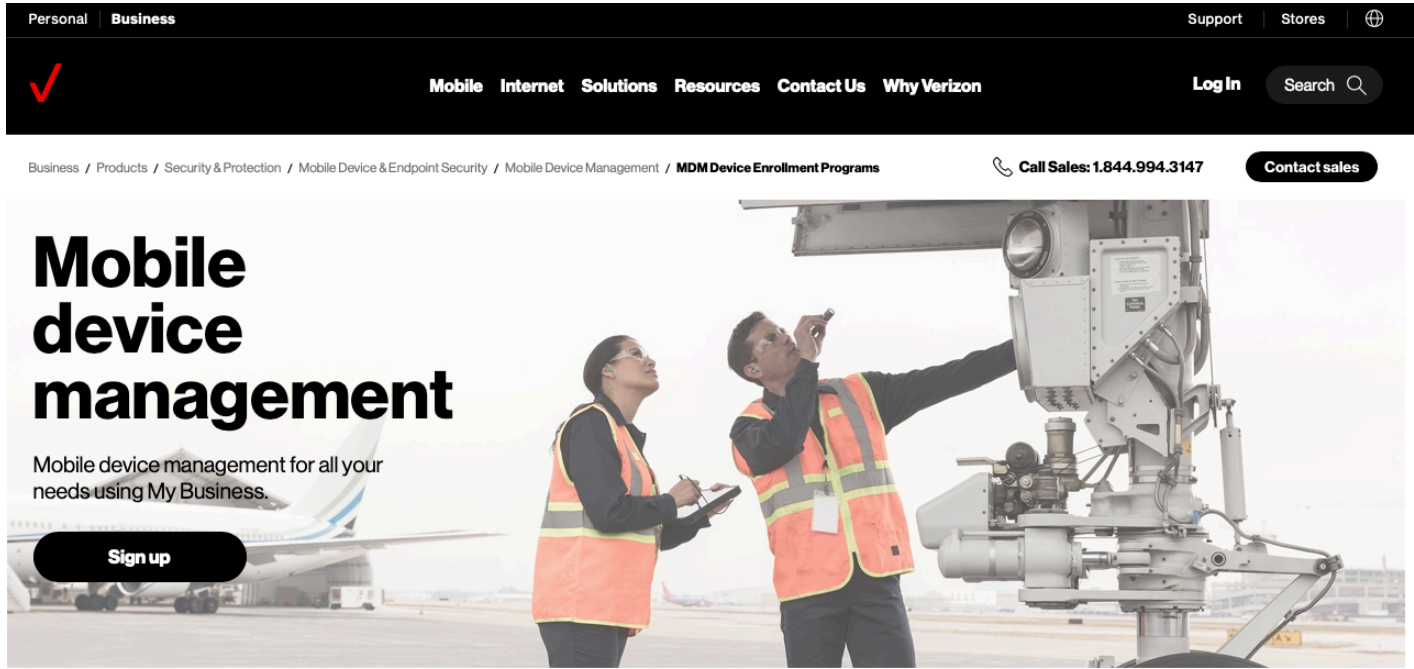
Claim	Public Documentation
ciated with the first software component, or a signature associated with the first software component.	
19. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises at least a portion of an application on the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
20. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises an operating system component, function, or service.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises an operating system component, function, or service.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
21. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a software function, utility, process, or tool.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a software function, utility, process, or tool.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
22. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a plurality of applications, processes, functions, activities, or services.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a plurality of applications, processes, functions, activities, or services.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>

Claim	Public Documentation
23. The non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a Java archive (JAR) file, an application that uses an operating system (OS) function, an application that uses a proxy service function, or an OS process function that supports an application or OS function.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the first software component comprises a Java archive (JAR) file, an application that uses an operating system (OS) function, an application that uses a proxy service function, or an OS process function that supports an application or OS function.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
24. The non-transitory computer-readable storage medium recited in claim 1, wherein the network element is communicatively coupled to the wireless end-user device over the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the network element is communicatively coupled to the wireless end-user device over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p> <p>As a further example, the Accused Instrumentalities communicate with network elements. <i>See, e.g.</i>, <a href="https://www.verizon.com/plans/">https://www.verizon.com/plans/</a>:</p>

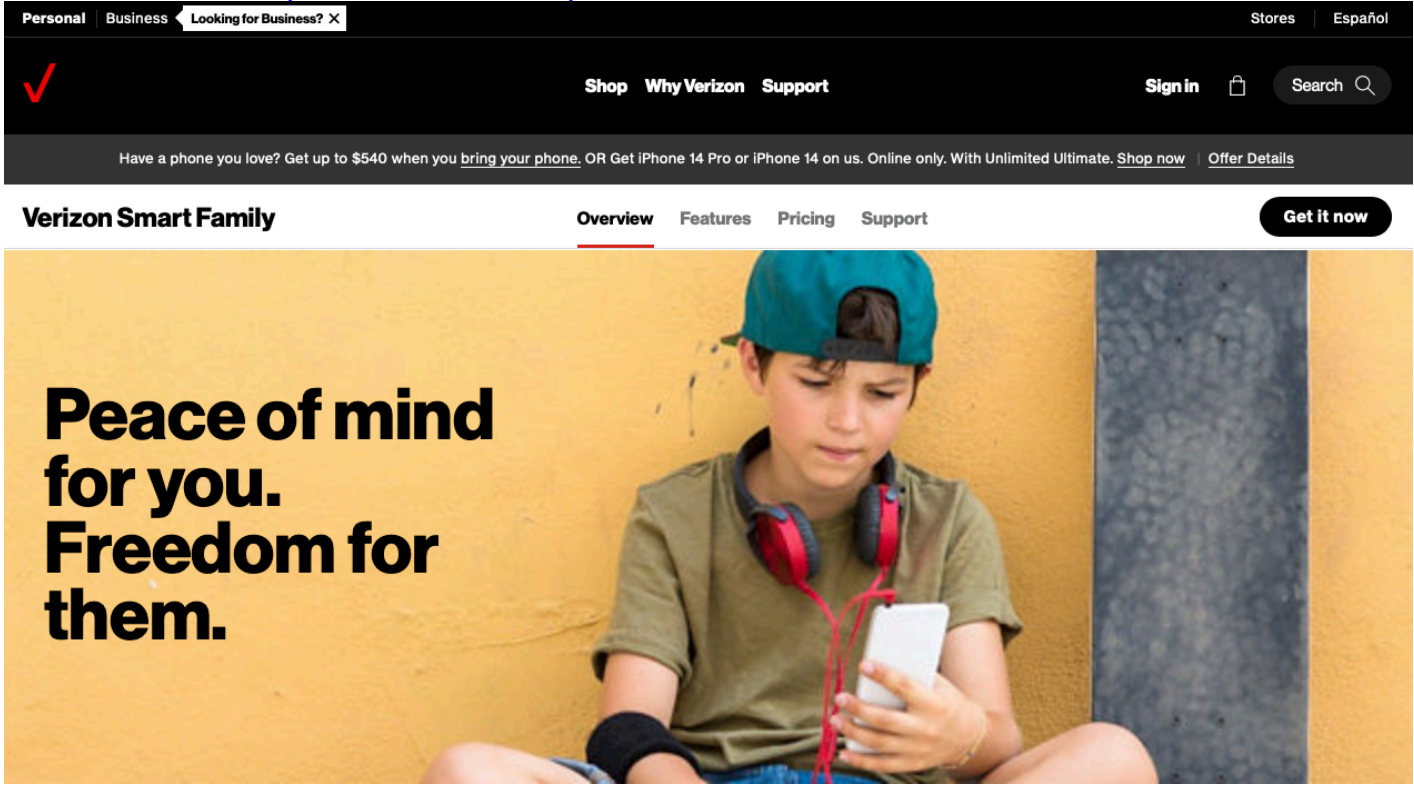
Claim	Public Documentation
	<div><div><div><div><div>Personal</div><div>Business</div></div><div>Stores</div><div>Español</div></div><div><div><div></div><div>Shop</div><div>Why Verizon</div><div>Support</div></div><div><div>Sign in</div><div></div><div>Search </div></div></div><div><div>Have a phone you love? Get up to \$540 when you <a href="#">bring your phone</a>. OR Get iPhone 14 Pro or iPhone 14 on us. Online only. With Unlimited Ultimate. <a href="#">Shop now</a>   <a href="#">Offer Details</a></div></div></div><div><div><h2>Pick your perfect plan.</h2><p>Experience ultra-fast mobile and home internet plans. Plus, get special discounts to save you more.</p></div><div><div><h3>Mobile plans</h3><p>Get our best plans ever, with unlimited data on all your devices.</p><div><div><div>Unlimited</div><div>Get the power of 5G Ultra Wideband with unlimited data and 10x faster speeds.<sup>1</sup></div><div>→</div></div><div><div>Prepaid</div><div>Pay before you talk, text and stream. Now including Unlimited and 5G.</div><div>→</div></div><div><div>Connected devices</div><div>Get unlimited monthly data for devices such as mobile hotspots, tablets, laptops, smartwatches and more.</div><div>→</div></div><div><div>International</div><div>Whether you're traveling the world or at home in the US, Verizon helps you stay connected.</div><div>→</div></div></div></div><div><p>; <a href="https://www.verizon.com/business/products/plans/">https://www.verizon.com/business/products/plans/</a>:</p></div></div></div></div>


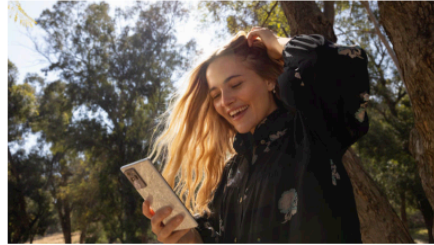



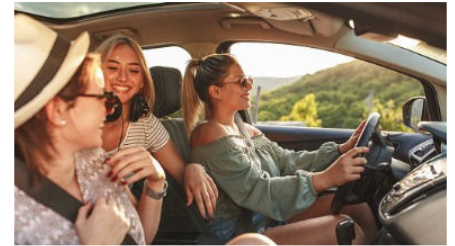
Claim	Public Documentation
	<div><div><div><div>PersonalBusiness</div><div>SupportStores</div></div><div><div></div><div>MobileInternetSolutionsResourcesContact UsWhy Verizon</div><div>Log InSearch</div></div></div><div><div>Business / Products / Plans</div><div>Call Sales: 1.888.789.1223Contact sales</div></div><div><h1>Plans for your business</h1><p>From mobile networks to internet connectivity and cybersecurity protection, we have plans to fit your business needs.</p></div><div><div>Mobile plansFios internet plansVoice plans</div><div><h2>Business Unlimited Mobility Plans</h2><p>Our Business Unlimited plans provide mobility built for getting work done, with the 5G, data and performance your business needs.</p><div><div>View detailsOff</div><div><div><h3>Business Unlimited Start 5G</h3><p>Get the essentials</p><p>As low as \$30/line ⓘ</p><p>Get started</p></div><div><h3>Business Unlimited Plus 5G</h3><p>Boost your productivity</p><p>As low as \$40/line ⓘ</p><p>Get started</p></div><div><h3>Business Unlimited Pro 5G</h3><p>Get more of what you need</p><p>As low as \$45/line ⓘ</p><p>Get started</p></div></div></div></div><div><p>; <a href="https://www.verizon.com/support/knowledge-base-212894/">https://www.verizon.com/support/knowledge-base-212894/</a>:</p></div></div></div>

Claim	Public Documentation
	<p data-bbox="606 272 953 297"><a href="#">Support</a> &gt; <a href="#">Apple</a> &gt; <a href="#">Apple iPhone 15</a></p> <h1 data-bbox="638 370 1661 513">Apple iPhone - Update Carrier Settings</h1> <div data-bbox="642 597 1948 1094"><p data-bbox="688 643 770 667"><b>NOTE</b></p><ul data-bbox="732 708 1898 1024" style="list-style-type: none"><li data-bbox="732 708 1898 862">• Carrier settings updates are small files that are installed on iOS devices. The carrier settings include updates to Access Point Names (APNs), MMS settings, features like tethering and default apps. Having the most up to date carrier settings is recommended for the proper functionality of the device.</li><li data-bbox="732 911 1898 1024">• Apple® Watch® Series 3 users must be on Carrier Bundle 29.1 or higher (check on your iPhone® via <b>Settings</b> &gt; <b>General</b> &gt; <b>About</b> &gt; <b>Carrier</b>). For more info on how to check carrier and / or update your Carrier version, refer to Updating Your Carrier Settings</li></ul></div> <ol data-bbox="648 1159 1671 1393" style="list-style-type: none"><li data-bbox="648 1159 1671 1256">1. From a Home screen on your <b>Settings</b>  &gt; <b>General</b>.<ul data-bbox="722 1192 1671 1256" style="list-style-type: none"><li data-bbox="722 1192 1325 1219">→ If unavailable, swipe left to access the App Library.</li><li data-bbox="722 1224 1671 1256">→ If a carrier settings update is available, you're presented with an option to update.</li></ul></li><li data-bbox="648 1297 1352 1393">2. Tap <b>About</b>.<ul data-bbox="722 1330 1352 1393" style="list-style-type: none"><li data-bbox="722 1330 1352 1357">→ If an update is available, an option appears to update.</li><li data-bbox="722 1362 1352 1393">→ To view the current carrier info, refer to <a href="#">View Carrier</a>.</li></ul></li></ol>

Claim	Public Documentation
	<p><a href="https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/">https://www.verizon.com/business/products/security/mobile-device-endpoint-security/mobile-device-management/mdm-device-enrollment-programs/</a>:</p> 
<p>25. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on an amount of time, a time of day, a day of a week, a schedule, a network busy state, a network performance state, a network quality-of-service state, a priority of the service usage activity, or a combination of these, a</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on an amount of time, a time of day, a day of a week, a schedule, a network busy state, a network performance state, a network quality-of-service state, a priority of the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, and 24.</p> <p>As a further example, the Accused Instrumentalities comprise policies based on network states. <i>See, e.g.</i>,</p>



Claim	Public Documentation
<p>priority of the service usage activity, or a combination of these.</p>	<p><a href="https://developer.android.com/training/basics/network-ops/reading-network-state">https://developer.android.com/training/basics/network-ops/reading-network-state</a>; <a href="https://developer.android.com/reference/android/net/NetworkCapabilities">https://developer.android.com/reference/android/net/NetworkCapabilities</a>; <a href="https://developer.android.com/about/versions/pie/android-9.0">https://developer.android.com/about/versions/pie/android-9.0</a>.</p> <p>As a further example, the Accused Instrumentalities comprise policies based on based on an amount of time, a time of day, a day of a week, a schedule, or a combination of one of these or other policies comprised in the exemplary citations found in claims 1-6, 8-9, 14, and 24. <i>See, e.g.,</i> <a href="https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family">https://www.verizon.com/solutions-and-services/add-ons/safety/verizon-smart-family</a>:</p> 

Claim	Public Documentation
	<div data-bbox="596 253 1026 496">  </div> <div data-bbox="588 526 787 566"> <p><b>Block it Out</b></p> </div> <div data-bbox="588 578 1024 628"> <p>Keep certain apps and sites blocked until your kid is ready.</p> </div> <div data-bbox="1066 253 1497 496">  </div> <div data-bbox="1060 526 1423 570"> <p><b>Trusted contacts only</b></p> </div> <div data-bbox="1060 578 1495 695"> <p>Make sure they're only texting and chatting with contacts you've approved. Learn more about setting Trusted Contacts by visiting: <a href="https://www.verizon.com/support/how-to-use-verizon-smart-family/">https://www.verizon.com/support/how-to-use-verizon-smart-family/</a>.</p> </div> <div data-bbox="1535 253 1986 496">  </div> <div data-bbox="1528 526 1900 566"> <p><b>Cut back screen time</b></p> </div> <div data-bbox="1528 578 1990 649"> <p>Turn off the web during school hours, bedtime or dinner time so they can focus on what matters most.</p> </div> <div data-bbox="596 781 1026 1024">  </div> <div data-bbox="588 1055 938 1097"> <p><b>Know where they are</b></p> </div> <div data-bbox="588 1107 1005 1177"> <p>Location tracking keeps tabs on your child's phone and sends alerts when they arrive at their destination.</p> </div> <div data-bbox="1066 781 1497 1024">  </div> <div data-bbox="1060 1055 1249 1097"> <p><b>Pick me up</b></p> </div> <div data-bbox="1060 1107 1497 1156"> <p>Kids can request and share location with their parents.</p> </div> <div data-bbox="1535 781 1986 1024">  </div> <div data-bbox="1528 1055 1879 1130"> <p><b>View their driving or passenger activity</b></p> </div> <div data-bbox="1528 1140 1990 1190"> <p>Keep your mind at ease whether your kids are on the bus, carpooling or driving.</p> </div> <div data-bbox="577 1214 2011 1289"> <p>; <a href="https://www.verizon.com/support/knowledge-base-206963/">https://www.verizon.com/support/knowledge-base-206963/</a>; <a href="https://www.verizon.com/support/knowledge-base-152696/">https://www.verizon.com/support/knowledge-base-152696/</a>; <a href="https://www.verizon.com/support/verizon-smart-family-faqs/">https://www.verizon.com/support/verizon-smart-family-faqs/</a>:</p> </div>

## What Verizon Smart Family features are available without downloading the Verizon Smart Family Companion app on my child's device?

Certain features are only available if the [Verizon Smart Family Companion app](#) is installed on your child's smartphone and paired with the Verizon Smart Family app on your device.

- **Without pairing, you can:**

- View call and text activity
- Set time restrictions on texts, calls and data usage\*
- Set data limits\*
- Set text, call and purchase limits
- Get access to the device's network location

Note: Network location accuracy may vary up to a few miles.

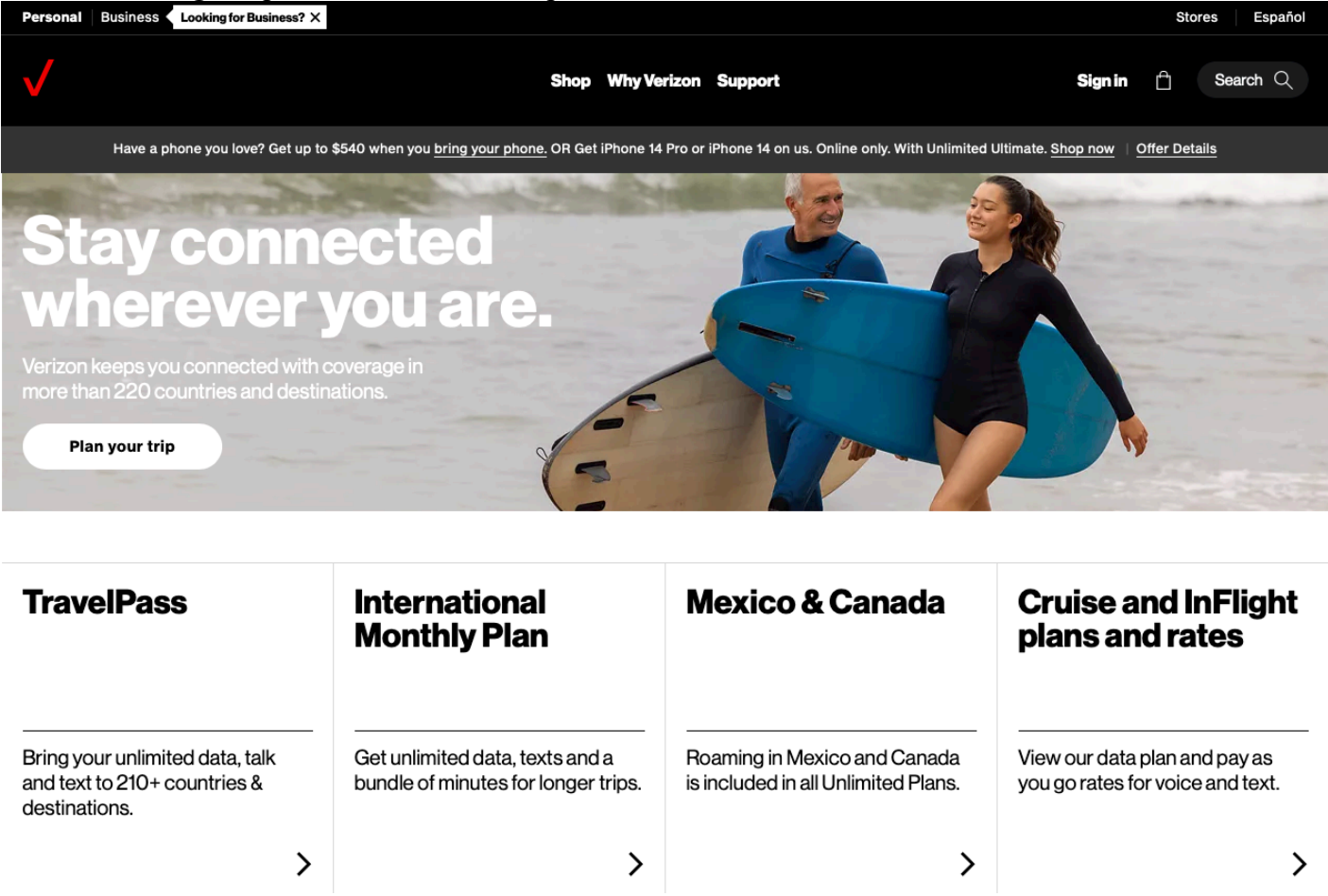
- **You must pair to:**

- Set content filters
- Monitor web and app activity
- Pause internet access
- Set time restrictions on Wi-Fi usage
- Locate family members and set location alerts with the best location accuracy
- Use the location check-in feature, where family members can send you their precise location when they arrive at their destination
- Use the **Pick Me Up** feature that lets your child send a request for a ride to a parent line

Claim	Public Documentation
<p>26. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a background service class, a background service state, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a background service class, a background service state, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>27. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on at least an aspect of a service plan.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on at least an aspect of a service plan.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>28. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a behavior of the first software component, a behavior of the service usage activity, a messaging layer behavior, a random back-off, a power state of the wireless end-user device, a usage state of the wireless end-user device, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a behavior of the first software component, a behavior of the service usage activity, a messaging layer behavior, a random back-off, a power state of the wireless end-user device, a usage state of the wireless end-user device, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>29. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a user interaction with the first software component, a user interaction with the service usage activity, a user interaction with the wireless end-user device,</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a user interaction with the first software component, a user interaction with the service usage activity, a user interaction with the wireless end-user device, a user interface priority of the service usage activity, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
a user interface priority of the service usage activity, or a combination of these.	
30. The non-transitory computer-readable storage medium recited in claim 1, wherein the wireless end-user device is part of a device group, and wherein the policy is associated with the device group.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the wireless end-user device is part of a device group, and wherein the policy is associated with the device group.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
31. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
32. The non-transitory computer-readable storage medium recited in claim 31, wherein the type of the wireless network is cellular, 2G, 3G, 4G, home, roaming, wireless fidelity (WiFi), or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 31, wherein the type of the wireless network is cellular, 2G, 3G, 4G, home, roaming, wireless fidelity (WiFi), or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
33. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a roaming condition of the wireless end-user device, a cost associated with communicating over the wireless network, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a roaming condition of the wireless end-user device, a cost associated with communicating over the wireless network, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>



Claim	Public Documentation
	<p>For further example, the policy can be based on a roaming condition of the wireless end-user device, or a combination of a roaming condition and a cost associated with the plan used to communicate over the wireless network. <i>See, e.g.</i>, <a href="https://www.verizon.com/plans/international/international-travel/">https://www.verizon.com/plans/international/international-travel/</a></p>  <p><a href="https://www.verizon.com/support/international-travel-faqs/#ready-outside-us">https://www.verizon.com/support/international-travel-faqs/#ready-outside-us</a></p>

## How do I get my device ready to use outside the US?

Before you travel internationally, make sure your device's roaming is turned on so your device can connect to cellular networks in your destination country.

To turn on roaming, start on your device's home screen:

Device	Steps
iPhone®	1. Tap <b>Settings</b> (the gear icon).
	2. Tap <b>Cellular</b> , then tap <b>Cellular Data Options</b> , then <b>Roaming</b> .
	3. Slide both the <b>Voice Roaming</b> and the <b>Data Roaming</b> selectors to Green (on).
	4. Slide the <b>International CDMA</b> selector to off.
Motorola	1. Go to your Apps and tap <b>Settings</b> (the gear icon).
	2. Tap <b>Network &amp; Internet</b> , then <b>Mobile Network</b> , then <b>Data Roaming</b> .
	3. Slide the <b>Data Roaming</b> selector to the right until it turns green.
	4. "Allow data roaming?" appears. Choose <b>OK</b> .
	5. Tap <b>Preferred network type</b> , then tap <b>Global</b> .
Android™	1. Go to your Apps, tap <b>Settings</b> , then tap <b>More</b> .
	2. Tap <b>Mobile Networks</b> and then <b>Data Roaming access</b> .
	3. Tap <b>Allow access for all trips</b> and <b>Set Network Mode to Global</b> .

Claim	Public Documentation
34. The non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises preventing the first software component from launching, executing, or running.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises preventing the first software component from launching, executing, or running.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
35. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies the first software component or the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies the first software component or the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
36. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies a network parameter or a network type.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of the policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input identifies a network parameter or a network type.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
37. The non-transitory computer-readable storage medium recited	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a usage limit or a threshold.”</p>



Claim	Public Documentation
in claim 1, wherein the policy is based on a usage limit or a threshold.	<p data-bbox="583 277 1587 313"><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p> <p data-bbox="583 354 1995 459">As a further example, the policy may be based on a usage limit or a threshold such as a limit of the amount of data available for a given plan. <i>See, e.g.</i>, claims 1-6, 8-9, 14, 24 and 25; <a href="https://www.verizon.com/support/data-boost-faq/">https://www.verizon.com/support/data-boost-faq/</a>:</p>

## What's a Data Boost?



A Data Boost is extra high-speed data the Account Owner or Account Manager can buy in My Verizon to help the account's lines avoid slower connection speeds.

How the Data Boost is used depends on your plan:

Your plan	What buying a Data Boost does
<u>Unlimited Ultimate, Unlimited Plus</u> and most previously-available unlimited mobile phone plans.	When you <u>add a 5 GB Data Boost</u> to a line on your account, Mobile Hotspot 4G LTE / 5G data-boost-faqs/ speed resumes for that line. When you go over your plan's data allowance, your general device use and Mobile Hotspot data may still be temporarily slower than other traffic in times of congestion.
Unlimited Welcome	Data Boosts aren't available unless you first buy the <u>\$10/month 100 GB Mobile Hotspot perk*</u> You can then add a data boost to that perk if needed.
Go Unlimited**	Data Boosts aren't available.
Shared Data Plan – 5GB**, Shared Data Plan – 10GB**, The new Verizon Plan (shared data plans, e.g., S, M, L)**	<u>Buy a Data Boost</u> to add 1 GB of 4G LTE / 5G ⓘ data for the account's general device use, including Mobile Hotspot.
More Unlimited and Essential, Plus, Pro & Premium plans for mobile hotspot devices	<u>Buy a Data Boost</u> to add 5 GB more of 4G LTE / 5G ⓘ / 5G Ultra Wideband ⓘ data to your mobile hotspot device.
<u>Prepaid monthly phone plans***</u>	You can <u>buy more high speed data</u> for your general device use, including Mobile Hotspot.

Claim	Public Documentation
<p>38. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a limit, wherein the limit is based on the user input obtained through the user interface of the wireless end-user device, a user preference, an indication of a threshold, a total traffic, a type of traffic, a destination, a port, a frequency of access, an access behavior, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a limit, wherein the limit is based on the user input obtained through the user interface of the wireless end-user device, a user preference, an indication of a threshold, a total traffic, a type of traffic, a destination, a port, a frequency of access, an access behavior, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
<p>39. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the service usage activity, a priority of the service usage activity, a duration of the service usage activity, a characteristic of the wireless network, a quality-of-service (QoS) rule associated with the service usage activity, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is based on a type of the service usage activity, a priority of the service usage activity, a duration of the service usage activity, a characteristic of the wireless network, a quality-of-service (QoS) rule associated with the service usage activity, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
<p>40. The non-transitory computer-readable storage medium recited in claim 1, wherein the policy comprises one or more filters, wherein the one or more filters provide filtering based on: a characteristic of the wireless network, a service plan applicable to the</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy comprises one or more filters, wherein the one or more filters provide filtering based on: a characteristic of the wireless network, a service plan applicable to the wireless end-user device, a characteristic of the first software component, a time of day, a network busy state, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>

Claim	Public Documentation
wireless end-user device, a characteristic of the first software component, a time of day, a network busy state, or a combination of these.	
41. The non-transitory computer-readable storage medium recited in claim 1, wherein the wireless network is a first wireless network, and wherein the service usage activity is a first service usage activity, and wherein the policy assists the one or more processors to control the first service usage activity when the wireless end-user device is connected to the first wireless network and refrain from controlling a second service usage activity when the wireless end-user device is connected to a second wireless network, the second service usage activity being associated with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the wireless network is a first wireless network, and wherein the service usage activity is a first service usage activity, and wherein the policy assists the one or more processors to control the first service usage activity when the wireless end-user device is connected to the first wireless network and refrain from controlling a second service usage activity when the wireless end-user device is connected to a second wireless network, the second service usage activity being associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 37.</i></p>
42. The non-transitory computer-readable storage medium recited in claim 41, wherein control the first service usage activity comprises prevent, restrict, or block the first service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 41, wherein control the first service usage activity comprises prevent, restrict, or block the first service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 37, and 41.</i></p>

Claim	Public Documentation
43. The non-transitory computer-readable storage medium recited in claim 1, wherein the second wireless network is a wireless fidelity (WiFi) network or a home network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the second wireless network is a wireless fidelity (WiFi) network or a home network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
44. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a user is interacting with or has interacted with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a user is interacting with or has interacted with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
45. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a user interface foreground.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a user interface foreground.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
46. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a software update.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
service usage activity is a software update.	
47. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is or has been classified as being in a background state or the service usage activity is or has been classified as a background service.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is or has been classified as being in a background state or the service usage activity is or has been classified as a background service.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
48. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is identified by a list specifying one or more background activities.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is identified by a list specifying one or more background activities.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
49. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a foreground activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the service usage activity is a foreground activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
50. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[a] The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[b] determine a classification of the service usage activity, and	<p>The Accused Instrumentalities further “determine a classification of the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
51[c] based on the classification of the service usage activity, determine whether the service usage activity comprises the background activity.	<p>The Accused Instrumentalities “based on the classification of the service usage activity, determine whether the service usage activity comprises the background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
52. The non-transitory computer-readable storage medium recited in claim 51, wherein the classification of the service usage activity is based on: whether the first software component requires access to the wireless network, whether the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the classification of the service usage activity is based on: whether the first software component requires access to the wireless network, whether the one or more prospective or successful communications over the wireless network comprise an update to the first software component, whether the first software component requires information about the wireless network, whether the first software component requires location information, whether the one or more prospective or successful communications over the wireless network</p>

Claim	Public Documentation
<p>one or more prospective or successful communications over the wireless network comprise an update to the first software component, whether the first software component requires information about the wireless network, whether the first software component requires location information, whether the one or more prospective or successful communications over the wireless network comprise an operating system software update, whether the one or more prospective or successful communications over the wireless network comprise a security software update, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with a network-based back-up, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with an e-mail download, whether the one or more prospective or successful communications over the wireless network comprise communica-</p>	<p>comprise an operating system software update, whether the one or more prospective or successful communications over the wireless network comprise a security software update, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with a network-based back-up, whether the one or more prospective or successful communications over the wireless network comprise a communication associated with an e-mail download, whether the one or more prospective or successful communications over the wireless network comprise communications associated with a cloud synchronization service, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 51.</i></p>



Claim	Public Documentation
<p>tions associated with a cloud synchronization service, or a combination of these.</p>	
<p>53. The non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 51.</i></p>
<p>54. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity is based on a user interaction with the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 51, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein determine a classification of the service usage activity is based on a characteristic of the first software component, a content type associated with the service usage activity, a characteristic of the wireless network, a service plan, a user preference, the first user input, a second user input, the information from the network element, or a combination of these.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
<p>55. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a value comprising a measure of the service usage activity satisfies a condition relative to a threshold.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether a value comprising a measure of the service usage activity satisfies a condition relative to a threshold.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>56. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component or an unclassified component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is a foreground component or an unclassified component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
<p>57. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a foreground of user interaction or determine whether the first software component is in a background of user interaction.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is in a foreground of user interaction or determine whether the first software component is in a background of user interaction.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>

Claim	Public Documentation
<p>58. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether content associated with the service usage activity is in a foreground of a user interface of the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether content associated with the service usage activity is in a foreground of a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>59. The non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is active.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein determine whether the service usage activity comprises a background activity comprises determine whether the first software component is active.”</p> <p><i>S See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>60. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in allowing, restricting, delaying, throttling, or preventing the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in allowing, restricting, delaying, throttling, or preventing the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>61. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in: blocking access to the wireless network, restricting access to the</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in: blocking access to the wireless network, restricting access to the wireless network, delaying access to the wireless network, or aggregating and holding the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

Claim	Public Documentation
wireless network, delaying access to the wireless network, or aggregating and holding the service usage activity.	
62. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in queuing, time-windowing, suspending, quarantining, killing, or removing the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in queuing, time-windowing, suspending, quarantining, killing, or removing the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
63. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in preventing an update associated with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in preventing an update associated with the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
64. The non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise one or more Internet protocol (IP) address requests, and wherein apply the policy comprises at least assist in withholding, delaying, time-windowing, reducing in frequency, or	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the one or more prospective or successful communications over the wireless network comprise one or more Internet protocol (IP) address requests, and wherein apply the policy comprises at least assist in withholding, delaying, time-windowing, reducing in frequency, or aggregating at least a portion of the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

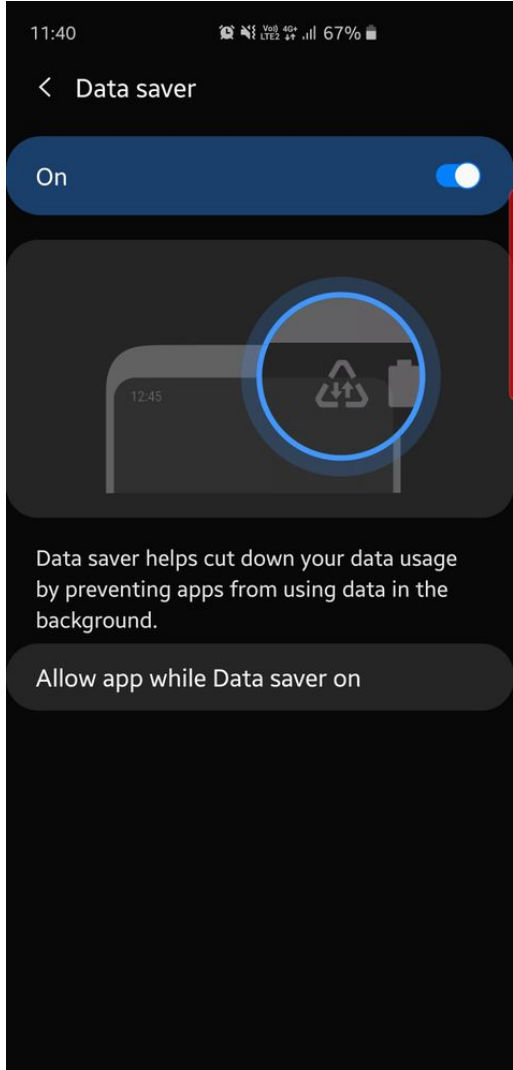
Claim	Public Documentation
aggregating at least a portion of the service usage activity.	
65. The non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises provide second information to the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises provide second information to the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
66. The non-transitory computer-readable storage medium recited in claim 65, wherein provide second information to the first software component comprises provide the second information through an application programming interface.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein provide second information to the first software component comprises provide the second information through an application programming interface.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</i></p>
67[a] The non-transitory computer-readable storage medium recited in claim 65, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</i></p>
67[b] provide third information to a second software component on the wireless end-user device, the	<p>The Accused Instrumentalities further “provide third information to a second software component on the wireless end-user device, the third information being different from the second information.”</p>

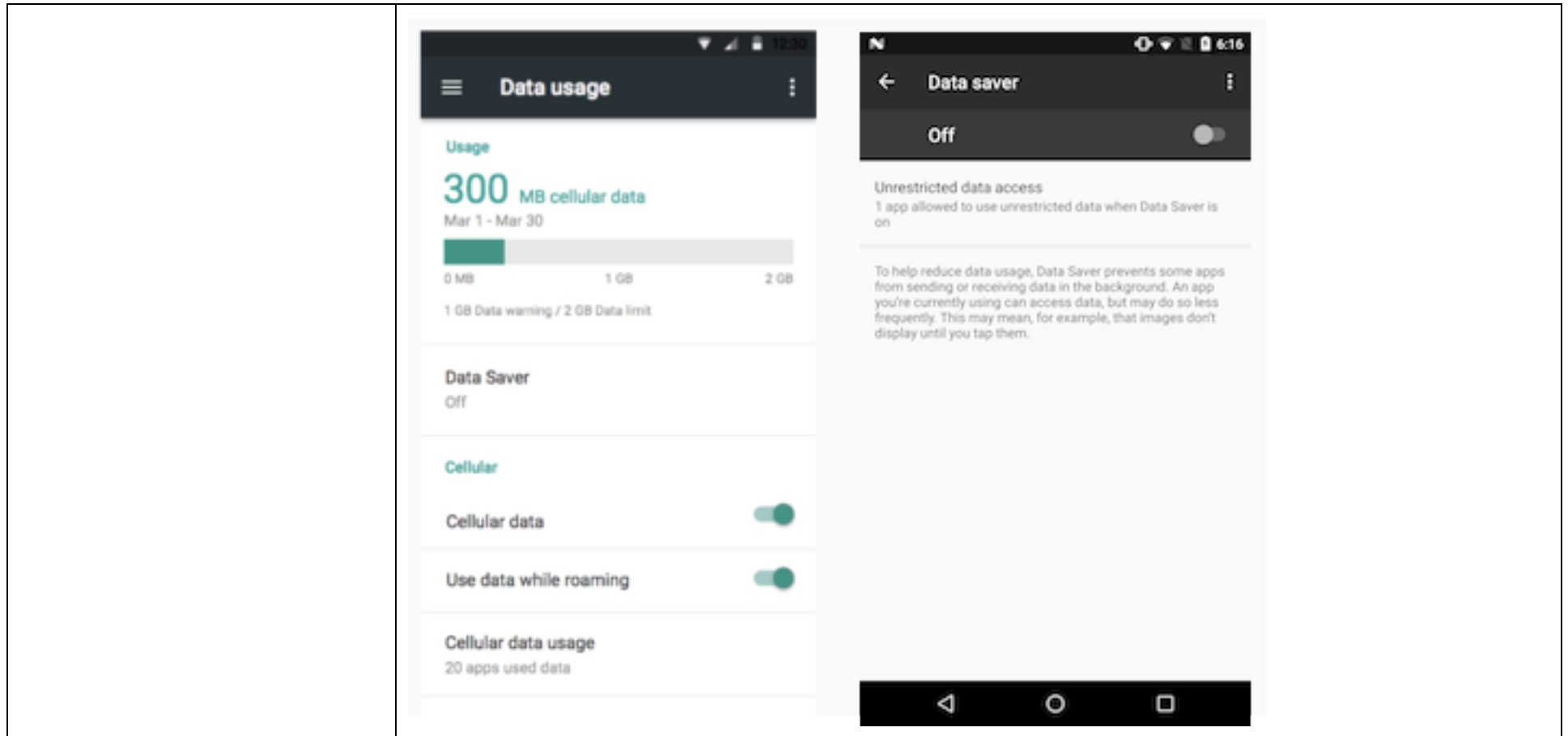
Claim	Public Documentation
third information being different from the second information.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.
68. The non-transitory computer-readable storage medium recited in claim 67, wherein provide third information to a second software component on the wireless end-user device comprises provide the third information through an application programming interface.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 67, wherein provide third information to a second software component on the wireless end-user device comprises provide the third information through an application programming interface.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>
69. The non-transitory computer-readable storage medium recited in claim 67, wherein the third information enables the second software component to communicate over the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 67, wherein the third information enables the second software component to communicate over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>
70. The non-transitory computer-readable storage medium recited in claim 65, wherein the wireless network is a first wireless network, and wherein the second information comprises a network access condition of the first wireless network, a network busy state associated with the first wireless network, a network availability state associated with the first wireless network, a network busy state associated with a second wireless network, a network availability	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein the wireless network is a first wireless network, and wherein the second information comprises a network access condition of the first wireless network, a network busy state associated with the first wireless network, a network availability state associated with the first wireless network, a network busy state associated with a second wireless network, a network availability state associated with the second wireless network, or information about the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 67.</p>

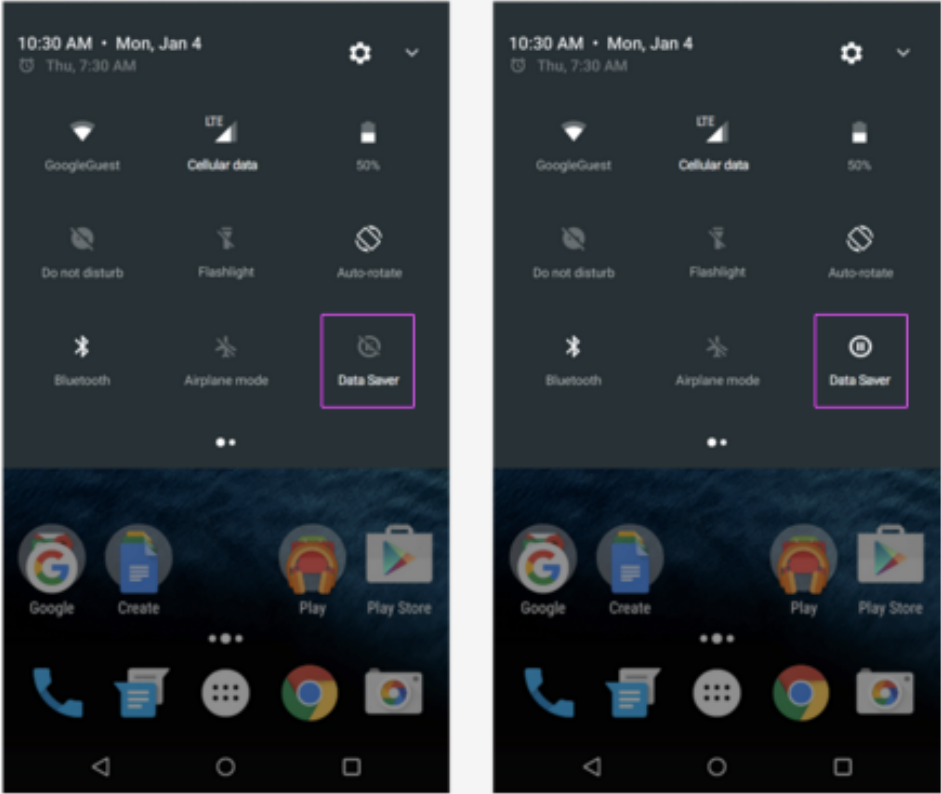
Claim	Public Documentation
state associated with the second wireless network, or information about the policy.	
71. The non-transitory computer-readable storage medium recited in claim 65, wherein the second information comprises a setting for assisting the first software component in restricting, allowing, blocking, throttling, deferring, time-scheduling, or queuing the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 65, wherein the second information comprises a setting for assisting the first software component in restricting, allowing, blocking, throttling, deferring, time-scheduling, or queuing the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 65.</p>
72. The non-transitory computer-readable storage medium recited in claim 71, wherein the setting is based on a characteristic of the wireless network, a network busy state associated with the wireless network, a time, a service plan associated with the wireless end-user device, a classification of the service usage activity, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 71, wherein the setting is based on a characteristic of the wireless network, a network busy state associated with the wireless network, a time, a service plan associated with the wireless end-user device, a classification of the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 65, and 71.</p>
73. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the first software component is allowed to access the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the first software component is allowed to access the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>

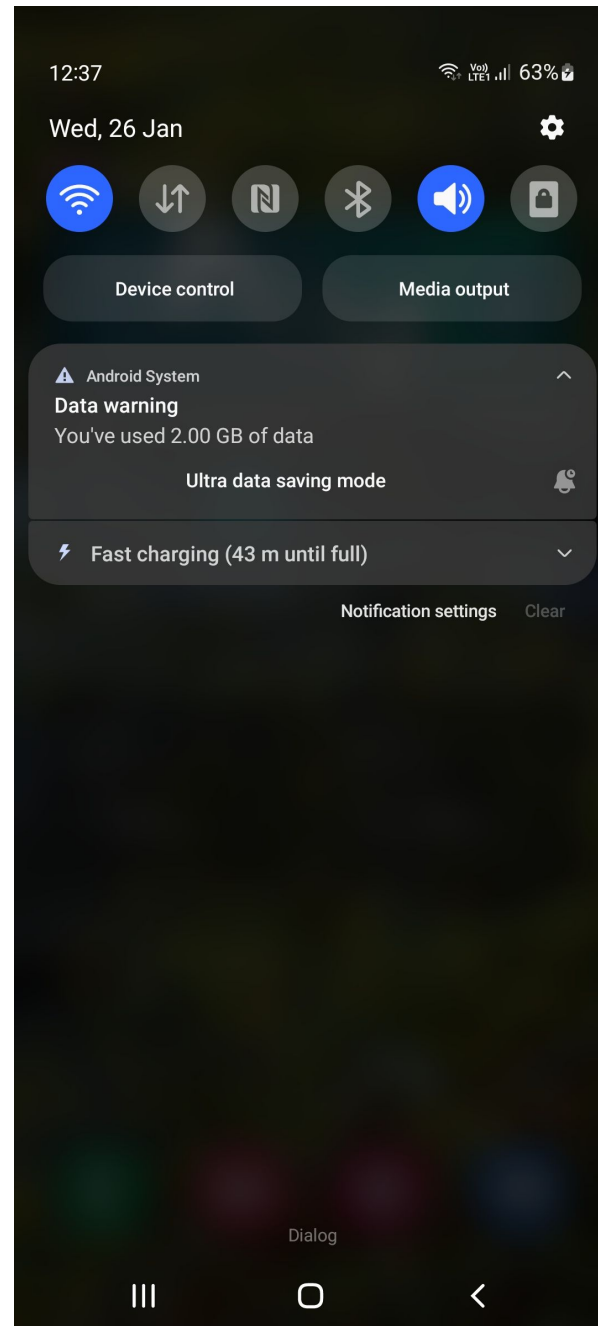
Claim	Public Documentation
74. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the wireless network is available.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component whether the wireless network is available.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
75. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component of a traffic control to be implemented or applied by the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises inform the first software component of a traffic control to be implemented or applied by the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
76. The non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
77. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification associated with the first software component or the	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification associated with the first software component or the service usage activity, the notification for presentation through a user interface of the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>



Claim	Public Documentation
<p>service usage activity, the notification for presentation through a user interface of the wireless end-user device.</p>	<p>As a further example, the Accused Instrumentalities cause a notification to be presented to a user. <i>See, e.g.</i>, exemplary screenshots:</p>  <p>The screenshot displays the 'Data saver' settings on an Android device. At the top, the status bar shows the time as 11:40, signal strength, VoLTE, 4G+ network, and 67% battery. The 'Data saver' toggle is switched on. Below the toggle, a graphic shows a smartphone with a recycling symbol and a battery icon, with a blue circle highlighting the battery icon. The text below the graphic reads: 'Data saver helps cut down your data usage by preventing apps from using data in the background.' At the bottom, there is a button that says 'Allow app while Data saver on'.</p>



Claim	Public Documentation
	



Claim	Public Documentation
	<p>; <a href="https://source.android.com/docs/core/data/data-saver">https://source.android.com/docs/core/data/data-saver</a>; <a href="https://developer.android.com/training/basics/net-work-ops/data-saver">https://developer.android.com/training/basics/net-work-ops/data-saver</a>:</p> <h3>Check data saver preferences</h3> <p>On Android 7.0 (API level 24) and higher, apps can use the <code>ConnectivityManager</code> API to determine what data usage restrictions are being applied. The <code>getRestrictBackgroundStatus()</code> method returns one of the following values:</p> <p><code>RESTRICT_BACKGROUND_STATUS_DISABLED</code></p> <p>Data Saver is disabled.</p> <p><code>RESTRICT_BACKGROUND_STATUS_ENABLED</code></p> <p>The user has enabled Data Saver for this app. Apps should make an effort to limit data usage in the foreground and gracefully handle restrictions to background data usage.</p> <p><code>RESTRICT_BACKGROUND_STATUS_WHITELISTED</code></p> <p>The user has enabled Data Saver but the app is allowed to bypass it. Apps should still make an effort to limit foreground and background data usage.</p> <p>; <a href="https://support.apple.com/en-us/HT205234">https://support.apple.com/en-us/HT205234</a>:</p>

## Use Low Power Mode to save battery life on your iPhone or iPad


Low Power Mode reduces the amount of power that your iPhone or iPad uses when the battery gets low.

To turn Low Power Mode on or off, go to Settings > Battery. You can also turn Low Power Mode on and off from Control Center. Go to Settings > Control Center > Customize Controls, then select Low Power Mode to add it to Control Center.

When Low Power Mode is on, your iPhone or iPad will last longer before you need to charge it, but some features might take longer to update or complete. Also, some tasks might not work until you turn off Low Power Mode, or until you charge your iPhone or iPad to 80% or higher.

Low Power Mode reduces or affects these features:

- 5G (except for video streaming) on iPhone 12 and iPhone 13 models<sup>1</sup>
- Auto-Lock (defaults to 30 seconds)
- Display brightness
- Display refresh rate (limited up to 60 Hz) on iPhone and iPad models with ProMotion display<sup>2</sup>
- Some visual effects
- iCloud Photos (temporarily paused)
- Automatic downloads
- Email fetch
- Background app refresh

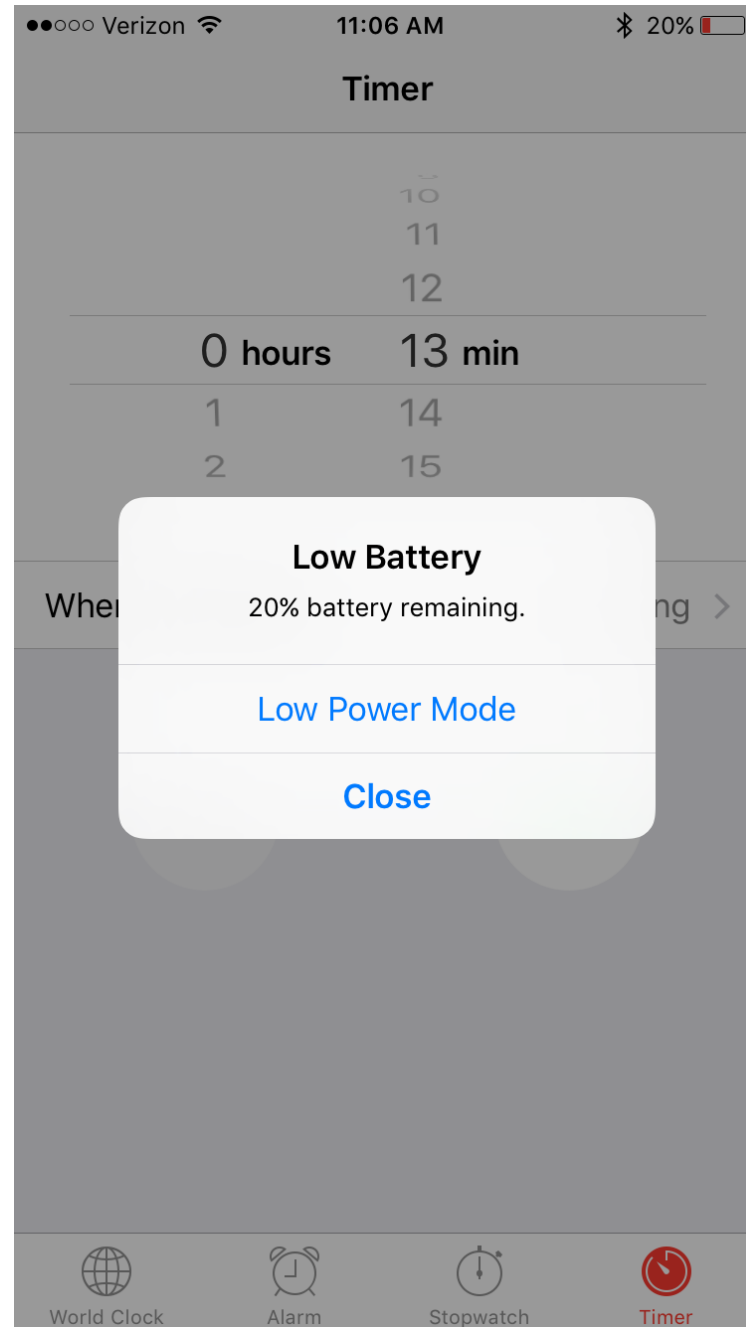
When Low Power Mode is on, the battery in the status bar will be yellow. You'll see a yellow battery icon  and the battery percentage. After you charge your iPhone or iPad to 80% or higher, Low Power Mode automatically turns off.



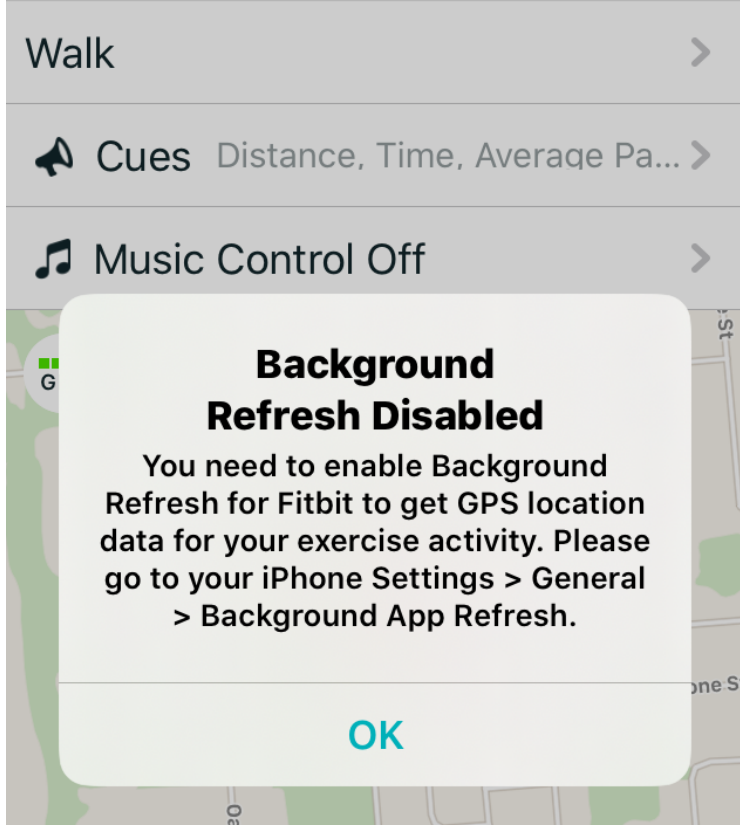
1. If you turn on Low Power Mode, 5G is disabled, except in some cases like video streaming and large downloads on iPhone 12 and iPhone 13 models. With iPhone 12 models, Low Power Mode disables 5G standalone (where available).

2. These devices have ProMotion display: iPhone 13 Pro and later, iPhone 13 Pro Max and later, iPad Pro 10.5-inch, all iPad Pro 11-inch models, and iPad Pro 12.9-inch (2nd generation) and later.







Claim	Public Documentation
	 <p data-bbox="583 1063 1537 1096">; see also, e.g., <a href="https://www.verizon.com/support/knowledge-base-72298/">https://www.verizon.com/support/knowledge-base-72298/</a>:</p>

# My Verizon Website - Turn On Usage Alerts

Here's info on managing the alerts you receive for data usage via My Verizon.

## NOTE

- This process is only available to Account Owners / Managers and doesn't apply to numbers enrolled in Verizon Smart Family™.
- Alerts (notifications) can also be managed via the My Verizon app.

1. From a web browser, sign in to My Verizon.
2. From the My Verizon Home page, navigate: **Account › Usage › Manage usage alerts**.
3. Click the **Dropdown icon** ▼ to the right of the desired number.
4. Ensure 'Data usage' notification is on (checked) for Email, SMS, or Push.  
→ Notification options vary by device and account role.
5. From the 'Send alerts when my data usage reaches the selected remaining amount' section, select (check) the desired data percentage (e.g., 0%, 10%, etc).  
→ To disable an alert, uncheck the desired percentage.
6. Click **Save**.

Claim	Public Documentation
	<p data-bbox="590 245 1371 277">; <a href="https://www.verizon.com/support/knowledge-base-205636/">https://www.verizon.com/support/knowledge-base-205636/</a>:</p> <div data-bbox="604 302 1969 997"><p data-bbox="653 350 737 378"><b>NOTE</b></p><ul data-bbox="699 415 1913 922" style="list-style-type: none"><li data-bbox="699 415 1913 651">• When push notifications or text messages are enabled, ensure:<ul data-bbox="852 480 1913 813" style="list-style-type: none"><li data-bbox="852 480 1913 634">□ App notifications are turned on from the <u>Android smartphone</u> or <u>Apple iPhone</u> for the My Verizon app. → All categories (e.g., Default, Alerts, Support, etc.) should be on in order to receive app notifications.</li><li data-bbox="852 691 1913 813">□ Do Not Disturb is turned off → Refer to <u>Apple iPhone - Turn Do Not Disturb On / Off</u> or the individual Android smartphone manual for assistance.</li></ul></li><li data-bbox="699 889 1457 922">• For additional info check out these <u>My Verizon app FAQs</u>.</li></ul></div> <p data-bbox="590 1024 1822 1057">; <a href="https://www.verizon.com/about/news/verizon-wireless-makes-it-easy-for-customers-to-monitor">https://www.verizon.com/about/news/verizon-wireless-makes-it-easy-for-customers-to-monitor</a></p>

Claim	Public Documentation
	<p><b>Check the usage meter in My Verizon or the My Verizon App</b></p> <p>This tool lets you monitor your usage online from your computer. It's a great way to quickly see how much you've used and how much of your monthly data allowance you have left. If you have an unlimited size* of the new Verizon Plan, you can also see how much Mobile Hotspot data you have left on each line.</p> <p>The round usage data meter is in the <u>My Usage</u> section of <u>My Verizon</u>, and shows your data usage and days remaining in your current bill cycle. The page also shows your minutes and messaging, if applicable. Refer to these often to track how your usage compares to the limits in your plan.</p> <p>If you're not near a computer, you can <u>view the usage meters</u> in My Verizon on your smartphone or tablet's web browser. If you have a compatible device, you can download and use the My Verizon app. Visit the <u>My Verizon app</u> page to download the app and learn more.</p> <p>; <a href="https://www.verizon.com/support/knowledge-base-217111/">https://www.verizon.com/support/knowledge-base-217111/</a>.</p>
<p>78. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification for presentation through a user interface of the wireless end-user device.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, controlling, blocking, modifying, removing, or replacing a notification for presentation through a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
<p>79. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the pol-</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the information from the network element is first information, and wherein apply the policy comprises obtain second information from the first software component.”</p>

Claim	Public Documentation
<p>icy comprises at least assist in intercepting a stack application programming interface (API) level or application messaging layer request.</p>	<p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
<p>80. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in killing or suspending the service usage activity or the first software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in killing or suspending the service usage activity or the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, and 14.</p>
<p>81. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in changing or setting a priority of the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in changing or setting a priority of the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>82. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in emulating a network application programming interface (API) message.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in emulating a network application programming interface (API) message.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</p>
<p>83. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the pol-</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, modifying, blocking, removing, injecting, swapping, or replacing an application interface message.”</p>

Claim	Public Documentation
icy comprises at least assist in intercepting, modifying, blocking, removing, injecting, swapping, or replacing an application interface message.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.
84[a] The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises:	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
84[b] at least assist in preventing initiation of the service usage activity by the first software component; and	The Accused Instrumentalities further comprise “at least assist in preventing initiation of the service usage activity by the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
84[c] send a message to the first software component.	The Accused Instrumentalities further comprise “send a message to the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
85. The non-transitory computer-readable storage medium recited in claim 84, wherein initiation of the service usage activity by the first software component comprises opening of a connection, opening of a socket, initiating transmission, initiating a data flow, or initiating a data stream.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 84, wherein initiation of the service usage activity by the first software component comprises opening of a connection, opening of a socket, initiating transmission, initiating a data flow, or initiating a data stream.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
86. The non-transitory computer-readable storage medium recited in claim 84, wherein the message	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 84, wherein the message comprises a reset message, an indication that the service usage activity is not allowed, or an indication that the wireless network is not available.”

Claim	Public Documentation
comprises a reset message, an indication that the service usage activity is not allowed, or an indication that the wireless network is not available.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
87[a] The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises:	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
87[b] identify a socket to be opened for the service usage activity; and	The Accused Instrumentalities further “identify a socket to be opened for the service usage activity.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
87[c] based on a condition, block the service usage activity or terminate the socket.	The Accused Instrumentalities “based on a condition, block the service usage activity or terminate the socket.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.
88. The non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises: blocking a network access event or attempt associated with the first software component, modulating a number of access events or attempts associated with the first software component, aggregating a plurality of access events or attempts associated with the first software component, or time-windowing the number of access	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein controlling the service usage activity comprises: blocking a network access event or attempt associated with the first software component, modulating a number of access events or attempts associated with the first software component, aggregating a plurality of access events or attempts associated with the first software component, or time-windowing the number of access events or attempts associated with the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.

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events or attempts associated with the first software component.	
89[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
89[b] if it is determined that the service usage activity is not the background activity, refrain from applying the policy.	<p>The Accused Instrumentalities further comprise “if it is determined that the service usage activity is not the background activity, refrain from applying the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
90[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>
90[b] if it is determined that the service usage activity is not the background activity, apply a second policy.	<p>The Accused Instrumentalities further comprise “if it is determined that the service usage activity is not the background activity, apply a second policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, and 25.</i></p>



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<p>91. The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises cause a notification to be presented through a user interface of the wireless end-user device.</p>	<p>The Accused Instrumentalities further comprise “non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises cause a notification to be presented through a user interface of the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
<p>92. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about the policy.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
<p>93. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
<p>94. The non-transitory computer-readable storage medium recited in claim 91, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user response to the notification.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user response to the notification.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>

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<p>95. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides a warning or an alert.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides a warning or an alert.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>96. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a service plan limit.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a service plan limit.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>97. The non-transitory computer-readable storage medium recited in claim 91, wherein the first software component is at least a portion of an application, and wherein the one or more prospective or successful communications over the wireless network comprise an attempt to launch, run, or execute the application, and wherein the notification comprises information about the attempt to launch, run, or execute the application.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the first software component is at least a portion of an application, and wherein the one or more prospective or successful communications over the wireless network comprise an attempt to launch, run, or execute the application, and wherein the notification comprises information about the attempt to launch, run, or execute the application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>98. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempted or successful launch or execution of</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempted or successful launch or execution of the first software component, and wherein the notification comprises information about the attempted or successful launch or execution of the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>

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<p>the first software component, and wherein the notification comprises information about the attempted or successful launch or execution of the first software component.</p>	
<p>99. The non-transitory computer-readable storage medium recited in claim 91, wherein the policy is based on a limit, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to determine that a data usage associated with the service usage activity is not less than the limit, and wherein cause a notification to be presented through a user interface of the wireless end-user device comprises trigger presentation of the notification based on the determination that the data usage associated with the service usage activity is not less than the limit.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the policy is based on a limit, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to determine that a data usage associated with the service usage activity is not less than the limit, and wherein cause a notification to be presented through a user interface of the wireless end-user device comprises trigger presentation of the notification based on the determination that the data usage associated with the service usage activity is not less than the limit.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
<p>100. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to download or load an application, and wherein the notification comprises information about the attempted download or load of the application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>

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download or load an application, and wherein the notification comprises information about the attempted download or load of the application.	
101. The non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to initiate usage of a cloud-based service or application, and wherein the notification comprises information about the attempted initiation of usage of the cloud-based service or application.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the one or more prospective or successful communications over the wireless network comprise an attempt to initiate usage of a cloud-based service or application, and wherein the notification comprises information about the attempted initiation of usage of the cloud-based service or application.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
102. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification indicates that one or more service usage activities are subject to the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification indicates that one or more service usage activities are subject to the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>
103. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a second network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification provides information about a second network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</i></p>

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104. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification comprises an offer for a service plan upgrade or downgrade.	<p>The Accused Instrumentalities comprise “-transitory computer-readable storage medium recited in claim 91, wherein the notification comprises an offer for a service plan upgrade or downgrade.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
105. The non-transitory computer-readable storage medium recited in claim 91, wherein apply the policy further comprises obtain an indication of a user preference in response to the notification.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein apply the policy further comprises obtain an indication of a user preference in response to the notification.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
106. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to associate the policy with a second software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to associate the policy with a second software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</p>
107. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow or block the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow or block the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</p>
108. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference identifies a traffic control setting associated with the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference identifies a traffic control setting associated with the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</p>

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tion of the user preference identifies a traffic control setting associated with the policy.	
109. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow the service usage activity under a specified condition.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to allow the service usage activity under a specified condition.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</p>
110. The non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to override or modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 105, wherein the indication of the user preference comprises a user directive to override or modify the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 105.</p>
111. The non-transitory computer-readable storage medium recited in claim 91, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, and 91.</p>
112. The non-transitory computer-readable storage medium recited in claim 111, wherein the trigger is: a measure of the service usage activity satisfies a first condition	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 111, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.”</p>

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relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 111.
113. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
114. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>
115. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an option to modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an option to modify the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</p>

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116. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
117. The non-transitory computer-readable storage medium recited in claim 91, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 91, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
118[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
118[b] cause a notification to be presented through a user interface of the wireless end-user device.	<p>The Accused Instrumentalities further “cause a notification to be presented through a user interface of the wireless end-user device.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.</i></p>
119. The non-transitory computer-readable storage medium recited	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about the policy.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</i></p>



Claim	Public Documentation
in claim 118, wherein the notification provides information about the policy.	
120. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about an option to set, control, override, or modify the at least an aspect of the policy or a second aspect of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
121. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification indicates that the service usage activity is the background activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification indicates that the service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
122. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about a second network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification provides information about a second network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>
123. The non-transitory computer-readable storage medium recited in claim 118, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to obtain an indication of a user preference in response to the notification.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, and 118.</p>

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more processors to obtain an indication of a user preference in response to the notification.	
124. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to associate the policy with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to associate the policy with the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, 118, and 123.</p>
125. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to restrict, allow, or block the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to restrict, allow, or block the service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 91, 118, and 123.</p>
126. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference identifies a traffic control setting associated with the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference identifies a traffic control setting associated with the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
127. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to override or modify the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user directive to override or modify the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>

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128. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user acknowledgment of the notification.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference comprises a user acknowledgment of the notification.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
129. The non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference indicates one or more network types.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 123, wherein the indication of the user preference indicates one or more network types.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
130. The non-transitory computer-readable storage medium recited in claim 129, wherein the one or more network types comprise WiFi, 4G, 3G, wireless, wired, or a combination of these.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 129, wherein the one or more network types comprise WiFi, 4G, 3G, wireless, wired, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 123.</p>
131. The non-transitory computer-readable storage medium recited in claim 118, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein cause a notification to be presented through a user interface of the wireless end-user device comprises cause the notification to be presented based on occurrence of a trigger.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
132. The non-transitory computer-readable storage medium recited in claim 131, wherein the trigger is: a measure of the service usage	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 131, wherein the trigger is: a measure of the service usage activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.”</p>

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activity satisfies a first condition relative to a threshold, an aspect of the service usage activity satisfies a second condition, a change to the policy, or a message from the network element.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 131.
133. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification enables a user associated with the wireless end-user device to obtain information about at least an aspect of the service usage activity or a service plan associated with the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
134. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents a list of service usage activities or software components, the list of service usage activities or software components including the service usage activity or the first software component.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>
135. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a setting associated with the policy.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a setting associated with the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</p>

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136. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
137. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless network associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
138. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a network busy state or a network availability state.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a network busy state or a network availability state.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
139. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless network associated with the first software component.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents an indication of a measure of usage of the wireless network associated with the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
140. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification presents information about a statistic associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

Claim	Public Documentation
statistic associated with the service usage activity.	
141. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
142. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with one or more networks, the one or more networks including the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing service usage information associated with one or more networks, the one or more networks including the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
143. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing information associated with a service plan.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a gauge providing information associated with a service plan.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
144. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification is provided through an e-mail, a text message, a window, a setting, or a voice message.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

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145. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a warning or an alert.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises a warning or an alert.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
146. The non-transitory computer-readable storage medium recited in claim 118, wherein the information from the network element is first information, and wherein the notification is based on second information from the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the information from the network element is first information, and wherein the notification is based on second information from the network element.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
147. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a cost or a charge associated with the service usage activity.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a cost or a charge associated with the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
148. The non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a service sponsor.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 118, wherein the notification comprises information about a service sponsor.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>
149[a] The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.</i></p>

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device, the machine-executable instructions further cause the one or more processors to:	
149[b] detect an attempted use of the first software component; and	The Accused Instrumentalities further “detect an attempted use of the first software component.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.
149[c] based on the detected attempted use of the first software component, cause a notification to be presented through a user interface of the wireless end-user device.	The Accused Instrumentalities “based on the detected attempted use of the first software component, cause a notification to be presented through a user interface of the wireless end-user device.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, and 118.
150. The non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to override the policy.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to override the policy.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.
151. The non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information about a cost or a charge associated with the service usage activity.	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information about a cost or a charge associated with the service usage activity.”  <i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.
152. The non-transitory computer-readable storage medium recited	The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to change or upgrade a service plan associated with the wireless end-user device.”



Claim	Public Documentation
<p>in claim 149, wherein the notification provides information to enable a user associated with the wireless end-user device to change or upgrade a service plan associated with the wireless end-user device.</p>	<p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</p>
<p>153. The non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of a policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input specifies a user preference associated with one or more network types.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the at least an aspect of a policy is based on the user input obtained through the user interface of the wireless end-user device, and wherein the user input specifies a user preference associated with one or more network types.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</p>
<p>154. The non-transitory computer-readable storage medium recited in claim 153, wherein the one or more network types comprise wireless fidelity (WiFi), home, roaming, 4G, 3G, wireless, wired, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 153, wherein the one or more network types comprise wireless fidelity (WiFi), home, roaming, 4G, 3G, wireless, wired, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, 78, 97, 118, and 149.</p>
<p>155. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the policy is a first policy, and wherein the first user input or a second user input comprises a directive to apply a second policy to a second software component of the plurality of software components on the wireless end-user device.”</p>

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policy is a first policy, and wherein the first user input or a second user input comprises a directive to apply a second policy to a second software component of the plurality of software components on the wireless end-user device.	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24-25, and 78.
156. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the first user input or a second user input comprises a directive to refrain from applying the policy to a second software component of the plurality of software components on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein the first user input or a second user input comprises a directive to refrain from applying the policy to a second software component of the plurality of software components on the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
157. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device comprises a directive to apply the policy to a second software component of the plurality of software components on the wireless end-user device.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device comprises a directive to apply the policy to a second software component of the plurality of software components on the wireless end-user device.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

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<p>158. The non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device specifies a user preference associated with the service usage activity or the first software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the user input obtained through the user interface of the wireless end-user device specifies a user preference associated with the service usage activity or the first software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>159. The non-transitory computer-readable storage medium recited in claim 158, wherein the user preference comprises a preference to restrict, allow, block, delay, or throttle the service usage activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 158, wherein the user preference comprises a preference to restrict, allow, block, delay, or throttle the service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>160[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>160[b] identify a second service usage activity of the wireless end-</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software</p>

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<p>user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and</p>	<p>component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>160[c] refrain from applying the policy to the second service usage activity.</p>	<p>The Accused Instrumentalities further “refrain from applying the policy to the second service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>161[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the background activity is a first background activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the background activity is a first background activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
<p>161[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>161[c] determine whether the second service usage activity is a second background activity;</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>161[d] if it is determined that the second service usage activity is the second background activity, apply a second policy to the second service usage activity.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply a second policy to the second service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>162. The non-transitory computer-readable storage medium recited in claim 161, wherein the first policy restricts or prevents the first background activity, and wherein the second policy allows the second background activity.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 161, wherein the first policy restricts or prevents the first background activity, and wherein the second policy allows the second background activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

Claim	Public Documentation
<p>163[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the wireless network is a first wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>163[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network; and</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component or with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising one or more prospective or successful communications over a second wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>163[c] apply a second policy to the second service usage activity.</p>	<p>The Accused Instrumentalities further “apply a second policy to the second service usage activity.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

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<p>164. The non-transitory computer-readable storage medium recited in claim 163, wherein the second policy comprises a control policy, a notification policy, or an accounting policy associated with the first software component or the second software component.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 163, wherein the second policy comprises a control policy, a notification policy, or an accounting policy associated with the first software component or the second software component.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>165[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the first wireless network, and wherein the background activity is a first background activity, and wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the first wireless network, and wherein the background activity is a first background activity, and wherein the user input obtained through the user interface of the wireless end-user device is a first user input, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

Claim	Public Documentation
<p>165[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>165[c] determine whether the second service usage activity is a second background activity; and</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>165[d] if it is determined that the second service usage activity is the second background activity, apply at least a portion of the policy, wherein the at least a portion of the policy is based on a second user input.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply at least a portion of the policy, wherein the at least a portion of the policy is based on a second user input.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>166[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>



Claim	Public Documentation
<p>the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	
<p>166[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>166[c] determine whether the second service usage activity is the background activity; and</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
<p>166[d] if it is determined that the second service usage activity is the background activity, refrain from applying at least a portion of the policy.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the background activity, refrain from applying at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
<p>167[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the background activity is a first background activity, and wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the background activity is a first background activity, and wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein the policy is a first policy, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>
<p>167[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with a second software component of the plurality of software components on the wireless end-user device, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</i></p>

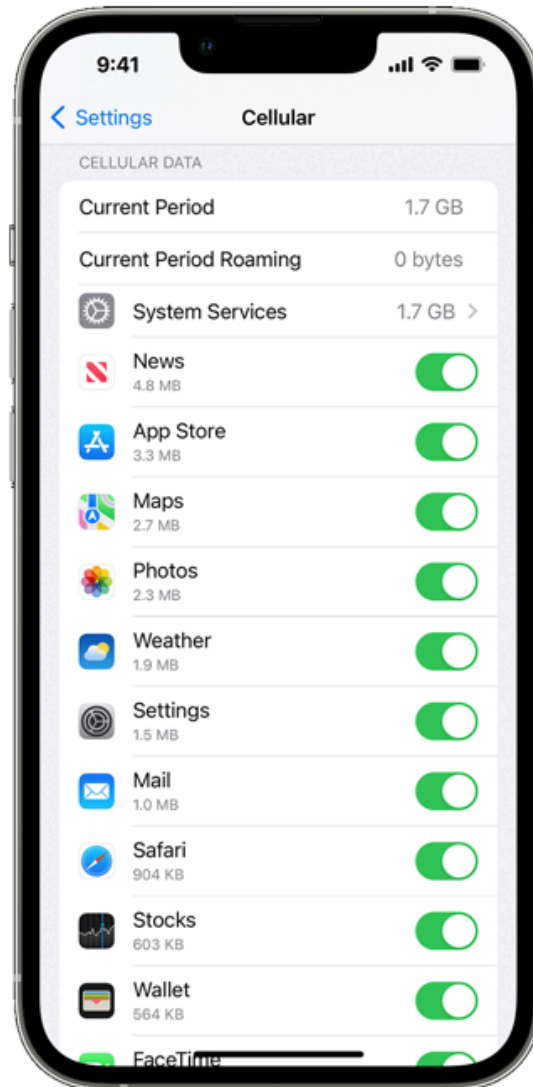
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167[c] determine whether the second service usage activity is a second background activity;	<p>The Accused Instrumentalities further “determine whether the second service usage activity is a second background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
167[d] obtain a second policy, the second policy to be applied when the second service usage activity is the second background activity, the second policy for controlling the second service usage activity; and	<p>The Accused Instrumentalities further “obtain a second policy, the second policy to be applied when the second service usage activity is the second background activity, the second policy for controlling the second service usage activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
167[e] if it is determined that the second service usage activity is the second background activity, apply the second policy.	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the second background activity, apply the second policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
168. The non-transitory computer-readable storage medium recited in claim 167, wherein the first policy, the second policy, or both are based on a network busy state, a network availability state, or a cost associated with the wireless network.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 167, wherein the first policy, the second policy, or both are based on a network busy state, a network availability state, or a cost associated with the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
169[a] The non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the service usage activity is a first service usage activity, and wherein the one or more prospective or successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to.”</p>

Claim	Public Documentation
successful communications over the wireless network are first one or more prospective or successful communications over the wireless network, and wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to:	<i>See</i> , for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.
169[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;	<p>The Accused Instrumentalities comprise “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
169[c] determine whether the second service usage activity is the background activity; and	<p>The Accused Instrumentalities comprise “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
169[d] if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.	<p>The Accused Instrumentalities comprise “if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>

Claim	Public Documentation
<p>170. The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to monitor the service usage activity, account for the service usage activity, report information about the service usage activity, or a combination of these.</p>	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to monitor the service usage activity, account for the service usage activity, report information about the service usage activity, or a combination of these.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p> <p>As a further example, the Accused Instrumentalities monitor, account for, and/or report information about service usage activities. <i>See, e.g.</i>, <a href="https://support.apple.com/en-us/HT201299">https://support.apple.com/en-us/HT201299</a>:</p>

## View how much data you're using

To see how much cellular data you've used, go to Settings > Cellular or Settings > Mobile Data. If you're using an iPad, you might see Settings > Cellular Data instead.



- Scroll down to find which apps are using cellular data. If you don't want an app to use cellular data, you can turn it off for that app. When cellular data is off, apps will use only Wi-Fi for data.
- To see the cellular data usage for individual System Services, go to Settings > Cellular or Settings > Mobile Data. Then tap System Services, in the list under Cellular Data. Cellular data can't be turned on or off for individual System Services.
- You can view the data-usage statistics for an app from a current period, or view app data statistics for apps that use data when you were roaming. To reset these statistics, go to Settings > Cellular or Settings > Mobile Data, and tap Reset Statistics.
- When you're using an iPhone with Dual SIM, you can see how much cellular data you've used with your selected cellular data number.

To get the most accurate cellular data usage from a current period, contact your carrier.

Claim	Public Documentation
171. The wireless end-user device embodying the non-transitory computer-readable storage medium recited in claim 1.	<p>The Accused Instrumentalities “embody[] the non-transitory computer-readable storage medium recited in claim 1.”</p> <p><i>See</i>, for example, the disclosures identified for claim 1.</p>
172. The non-transitory computer-readable storage medium recited in claim 1, wherein the network element comprises a service controller, a server, a cloud element, or a billing element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein the network element comprises a service controller, a server, a cloud element, or a billing element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78.</p>
173. The non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to provide information about the service usage activity to the network element.	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 1, wherein, when executed by the one or more processors of the wireless end-user device, the machine-executable instructions further cause the one or more processors to provide information about the service usage activity to the network element.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, and 78. As a further example, the Accused Instrumentalities provide information about the service usage activities to the network element. <i>See, e.g.</i>, <a href="https://www.verizon.com/support/knowledge-base-205730/">https://www.verizon.com/support/knowledge-base-205730/</a>.</p>
174[a] The non-transitory computer-readable storage medium recited in claim 173, wherein the information about the service usage activity comprises a count of data traffic associated with the service usage activity, a transaction	<p>The Accused Instrumentalities comprise “non-transitory computer-readable storage medium recited in claim 173, wherein the information about the service usage activity comprises a count of data traffic associated with the service usage activity, a transaction count, a message count, a connection time, a connection duration, a classification of traffic, an indication that a measure of the service usage activity satisfies a condition relative to a threshold, a parameter associated with the service usage activity, an indication that the background activity is restricted, or a combination of these.”</p>

Claim	Public Documentation
<p>count, a message count, a connection time, a connection duration, a classification of traffic, an indication that a measure of the service usage activity satisfies a condition relative to a threshold, a parameter associated with the service usage activity, an indication that the background activity is restricted, or a combination of these.</p>	<p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[b] identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network;</p>	<p>The Accused Instrumentalities further “identify a second service usage activity of the wireless end-user device, the second service usage activity being associated with the first software component, the second service usage activity comprising second one or more prospective or successful communications over the wireless network.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[c] determine whether the second service usage activity is the background activity; and</p>	<p>The Accused Instrumentalities further “determine whether the second service usage activity is the background activity.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>
<p>174[d] if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.</p>	<p>The Accused Instrumentalities “if it is determined that the second service usage activity is the background activity, apply at least a portion of the policy.”</p> <p><i>See</i>, for example, the disclosures identified for claims 1-6, 8-9, 14, 24, 25, 78, and 173.</p>



